THE LANCET.

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The Purvis Oration

ON

THE TREATMENT AND PROGNOSIS OF EXOPHTHALMIC GOITRE.

Delivered before the West Kent Medico-Chirurgical Society on Dec. 2nd, 1910,

BY W. HALE WHITE, M.D. LOND.,

SENIOR PHYSICIAN TO GUY'S HOSPITAL.

GENTLEMEN,—When I look down the list of those who have in previous years delivered this oration I feel much flattered by being asked to give it, and can assure you I thank you heartily for having invited me. It is a particular gratification to me, for the first orator was my teacher and friend, that fine surgeon and excellent man Arthur Durham.

The subject I have chosen, with the consent of your secretary, is one about which the teaching as to treatment is very various; if a surgeon writes about exophthalmic goitre he usually conveys the impression that most of the patients ought to have a considerable part of their thyroid gland removed or rendered functionless; on the other hand, the physician most often advises that this should not be done. Further, many authors leave us much in the dark as to what becomes of the sufferers from exophthalmic goitre. Nor is this surprising, for it is usually a chronic disease, and those who have it often pass out of the notice of those who first observed them. It is often forgotten that before we can tell whether any particular treatment is good or bad we must know what would happen to the patients if no treatment were adopted. Something may be learned about this if we trace the after-history of hospital patients, because after they have left the hospital and gone to their own homes in most cases very little systematic treatment is possible.

PROGNOSIS.

My clinical assistant, Dr. Jan Mahomed, kindly wrote to all the hospital patients, 148 in number, who had been in Guy's Hospital during the years 1888–1907 (both inclusive) suffering from exophthalmic goitre and who had been discharged. Many had moved, many did not reply to the letters, but 54 could be traced. Now of these 54 there were 12 who did not improve at all during their stay in the hospital, and yet ultimately got quite well or nearly well. This cannot have been due to the shortness of their stay in the hospital, for the number of days which each respectively remained in the hospital were 49, 14, 11, 36, 14, 95, 46, 58, 55, 45, 170, and 9, which gives an average stay of 50 days. I will not weary you with reading the history of each of the 12 cases, but let me mention a few.

CASE 1.—A woman, aged 20; in the hospital 49 days; no better on discharge but gradually got better; has worked hard for last 18 years. After leaving the hospital she married and had three children and is now a widow. Is quite well and has had no special treatment.

CASE 2.—A woman, aged 20; a severe case; in the hospital 58 days; no improvement; heard of five years after and is very much better and in a situation as a lady's maid.

CASE 3.—A woman, aged 42; was in the hospital 55 days; average case; had had the symptoms three years. No better on discharge. Heard of four and a quarter years after when she was wonderfully better.

CASE 4.—A woman, aged 34; was in the hospital 170 days; average case; had had the disease one and a half years. No improvement in the hospital; was able to work four months after discharge; heard of four years later when she said she was quite well.

CASE 5.—A woman, aged 19; was in the hospital 36 days; had had the disease one and a quarter years; average case; only slight improvement on discharge eight and a half years ago. Is now quite well and has been in service five years without a single day's illness.

CASE 6.—A woman, aged 42; in the hospital 46 days; mild case; no improvement on discharge. Came up to show herself five and a quarter years after; much better; hardly any signs of the disease left.

I have thus given you brief details of six of the 12 cases, and in the other six the story is the same. They certainly seem to show that in some persons at least there is a natural tendency for exophthalmic goitre to get well. No doubt this operates more often than these figures show, for it must have helped some of those who improved while in the hospital. We also learn that some who are afflicted with this disease recover without treatment. We rarely see death due to exophthalmic goitre, and we do not often see elderly women with it. These two facts illustrate the natural tendency of the disease to get well.

But it might be the reason why we do not often see elderly people with it is that although the malady itself does not often kill, yet sufferers from it are bad lives, inasmuch as they die more readily than most people from other diseases. About 25 years ago I published a few cases that I had followed up for some years which appeared to show that this was so; now I have tried to come to a more certain conclusion by following up a much larger number of cases. I shall at present deal only with cases which have not been operated upon.

I have been able to trace with the help of Dr. Jan Mahomed 49 patients who have been in Guy's Hospital during the 20 years 1888–1907 (inclusive), and I myself, with the hearty coöperation of their medical attendants, have been able to trace 53 private patients first seen between the years 1894–1909. Among the 49 hospital patients 8, and among the private 7, are now dead. I submitted my figures to my friend Mr. H. C. Thiselton and he has given me an actuarial report.

First, concerning the hospital cases. A comparison of the actual deaths was made with the expected deaths according to the Healthy Females Experience of 20 British offices amongst assured lives. The comparison shows that the total number of deaths was 8, as against 5 according to the experience of 20 British offices.

Secondly, as regards the 53 private patients the comparison shows that the total number of deaths was 7, as against 3 according to the experience of 20 British offices.

Putting the two groups together we see that the total deaths were 15, but the expected deaths among the same number of women of the same ages and followed up for the same time was according to the Healthy Females Experience table 8.

These figures suggest that if it were possible to obtain a great many more cases we should be able to prove that the expected mortality of sufferers from exophthalmic goitre not operated on who have been in a hospital and have been discharged and of sufferers from it in private practice who sought a second opinion (for all the private patients were referred to me by their usual medical attendant) would be about twice as great as it should be. In other words, sufferers from exophthalmic goitre are to some extent bad lives, but when we say that the mortality among them is about twice that of healthy women of the same age we must remember that those who have exopthalmic goitre are usually of such an age that the number of expected deaths among the healthy of that age for the next few years of their life is not great, therefore the increased number of deaths among those who have exophthalmic goitre does not represent a serious mortality. Too precise conclusions must not, however, be drawn from these figures, for all the cases here considered were either ill enough to come into hospital or to seek a second opinion. If all cases, and therefore many mild cases, of exophthalmic goitre were considered, the difference between the expected deaths among healthy women and those with exophthalmic goitre would doubtless be smaller. On the other hand, the comparison just made neglects those who died in the hospital with exophthalmic goitre; the inclusion of them would accentuate the difference between the expected deaths among the healthy and those among sufferers from exophthalmic goitre; but if we included in our comparison all those who in 20 years died in the hospital with exophthalmic goitre we ought to include all those who had been in the hospital and could not be traced, and the inclusion of them would diminish the difference between the expected deaths among the healthy and those with exophthalmic goitre which had been increased by the inclusion of those who had died in the hospital. It seems, however, a fair conclusion that the expected deaths among sufferers from exophthalmic goitre is somewhat, but not very much, greater than among the healthy—in other words, they are rather bad lives.

This conclusion leads us to our next inquiry—namely, the cause of death among those who have this disease. Still excluding those who were operated on I have notes of 18 cases of patients who died in Guy's Hospital. Eleven of these had either vomiting or diarrhœa, or both, and in many these were either the cause of death or contributed to it. For example, there is the case of a woman, aged 31, with special symptoms of palpitation, vomiting, and diarrhœa. These persisted, and after death gastro-enteritis was found. The next patient on my list was in the hospital 60 days.

Vomiting and diarrhœa set in, progressed, and killed the patient. After death gastro-enteritis was found. Both these cases had a rare symptom—namely, jaundice. This was no doubt catarrhal and due to the gastro-enteritis. I need not weary you with details of the other 9 cases. I know the cause of death in 7 private cases and in only 1 was it owing to diarrhœa and vomiting. This difference is no doubt due chiefly to the fact that private patients are more likely than hospital patients to seek treatment for vomiting and diarrhœa early. Both these symptoms are by no means uncommon in exophthalmic goitre, and the cases here quoted point strongly to the fact that the patient should be put to bed and be suitably treated directly vomiting or diarrhœa show themselves.

Combining the deaths among hospital and private patients, 6 died delirious, 1 became comatose, 2 had melancholia, and 1 had mania. We are thus reminded of the association of an unstable nervous system and exophthalmic goitre. Three had endocarditis, 1 had pericarditis, 2 died from rheumatic fever, and 1 attributed the disease to it. These illustrate the association between acute rheumatism and exophthalmic goitre. Two died from diabetes. It is well known that glycosuria occurs in association with exophthalmic goitre and so two deaths from diabetes hardly surprise us, but sometimes, as the exophthalmic goitre gets better, the accompanying glycosuria passes away. Thus I know a woman who nearly 20 years ago had glycosuria and exophthalmic goitre. The glycosuria passed away as she slowly recovered from her exophthalmic goitre and she is now perfectly well and has been so for 15 years at least. A smaller percentage of private than of hospital patients die, but that is what might have been expected considering that rest is the most important part of the treatment.

AFTER HISTORIES.

Let us now consider what becomes of those patients who are not operated upon and who do not die. I have been able to find this out with regard to 40 of the patients who were in the hospital from 1888 to 1907 and with regard to 47 of the private patients seen between 1894 and 1909. I have grouped them into three groups: (*a*) Those who have done well; (*b*) those who are moderately well or simply describe themselves as better; and (*c*) those who are not well. The following table shows the result:—

	Done well.	Moderately well.	Not well.
40 hospital cases	26	12	2
47 private cases	35	9	3

This is a very satisfactory result, especially as the cases have been traced for so long a period since they were first seen. Out of 87 cases 61 have done well and only 5 have not done well. In order to prove to you that the cases which are said to have done well really are well I will give you a few examples. Taking first the hospital cases—No. 1: The patient has required no treatment since he left the hospital 21 years ago. No. 4: This was a bad case; in the hospital 20 years ago; since has worked hard for 18 years, has married, has had three children, and is now a widow. No. 6: In the hospital 20 years ago; since then has worked as a district nurse. Subsequently married and has four children. No. 9: In the hospital 16 years ago; feels quite well; has not had a doctor for 12 years. No. 15: Was in the hospital 11 years ago, had had the disease for ten years; after leaving the hospital, since when she had had no treatment, she has married and has six children. No. 18: In the hospital 8½ years ago; is now quite well and has been in service for five years without a single day's illness. No. 24: The patient is included in this group as she is able to go to work. No. 25: Is working as a cook. No. 29: This patient does not know there is anything the matter. No. 32: Patient is now quite well and has been so since her discharge. No. 34: The patient is "wonderfully better." No. 35: The patient is perfectly well. No. 37: Patient has had no return of her old complaint and is married. No. 40: Was in the hospital 8½ years ago; has been well ever since she left the hospital; went into service for four years, then married, has four children, and never needs a doctor, "although she pays into a club." No. 47: Was quite cured by an American goitre cure. No. 48: Patient attributes her improvement to pregnancy.

I will now briefly give you some examples from the private cases, and you will see that those which we have grouped among those that have done well have also really done well. No. 4, a severe case, although very nervous, has been very well and is still improving. No. 6: This case is of great interest, for the patient was very ill when I saw her, but now she does her household duties and goes for walks. No. 7: This patient also was very ill, but her pulse is now 80 and she is expecting her confinement daily. No. 8: Patient quite well. No. 9: Working as a schoolmistress. Nos. 10, 12, and 14: These patients are quite well. No. 15: Takes an average amount of exercise and is not debarred from any social functions. No. 17: Was very ill indeed. I have never seen greater exophthalmos, but that is now much less, and she can walk three miles and considers herself quite well. No. 18: Completely cured. No. 20: In seven months gained 28 lb. No. 21: A case of great interest. For seven years before I saw the patient she had had one lobe of the thyroid removed because of the disease. She got better for a time, but then the disease returned, and when I saw her she had most of the symptoms of exophthalmic goitre present in an extreme degree, and the remaining lobe of the gland was enormous, but after prolonged continuous rest she got quite well and can now walk to business and do a hard day's work. Her sister had the disease severely at the time the patient underwent the operation, but she was not operated upon; I saw her at the same time her sister was ill and she was well. Nos. 22, 23, 24, 25, and 26: These cases call for no comment. The patients are all in good health and apparently are cured. No. 29: Patient is in very good health and goes to dances. No. 30: This patient also says that she is in very good health and is busy from 7 A.M. to 10 P.M. No. 31: Patient has done very well. No. 34: Was very ill. She had a loud systolic murmur and great œdema of the legs, yet "she got practically well and went to New Zealand." No. 35: This case does not call for comment. No. 36: Patient can go for long walks. No. 39: A very severe case. Got quite well. No. 40: Got quite well. No. 41: This was a very severe acute case following influenza. The thyroid became much enlarged in 14 days, and when I saw the patient the restlessness and sleeplessness were so formidable and his pulse was so weak that it was thought he would die, yet within 12 months he was riding across country. No. 42: Got quite well. No. 44: Another severe case following influenza. Patient got quite well. No. 45: This case occurs in the list of those patients who died. The patient, however, recovered from her exophthalmic goitre, but some years later succumbed to diabetes. No. 48: Many years ago the patient had exophthalmic goitre and a fibroid of the uterus. When the fibroid shrank so did the thyroid. She got well (except for slight exophthalmos) of her exophthalmic goitre. I saw her for acute pneumonia, from which she recovered at the age of 67 without any return of the exophthalmic goitre. No. 49: Of interest as being a very severe case. No. 50: A very severe case, and when I first saw the patient 14 years ago she also had glycosuria. This disappeared in two years and had not returned since. Two years after she was first seen she could walk eight miles. She has for many years been perfectly well. No. 51: A very severe case. The exophthalmic goitre was attributed to influenza. A loud systolic murmur was audible. The patient had much œdema of the legs, but he got perfectly well. Nos. 55 and 56: These patients got quite well.

Most of those that are classified as having done moderately well are much better. Among the hospital cases No. 11 has had several attacks of mental derangement, but she is now considerably better and in a situation. No. 13: Patient says her health is fairly good. She was able to take a situation after leaving Guy's; then she married and has had two children. Nos. 16, 21, and 23: These patients are now much better. No. 26: Patient has a little breakdown occasionally but is much better on the whole. No. 36: Is now much better. No. 38: Has improved. Nos. 43, 44, 46, and 54: These patients evidently, from the words they use, are all considerably better. Of the private cases, No. 1 really seems to do well as regards her exophthalmic goitre. her chief trouble is arterio-sclerosis and granular kidneys. No. 2 underwent treatment irregularly but she is somewhat better. No. 5 has improved somewhat, but her case is complicated by the fact that she has a mild degree of Raynaud's disease. No. 11 is slowly improving. No. 28 is well except that she is highly nervous and easily excited. No. 32 is better but did not rest as advised. No. 37 is well of her

exophthalmic goitre, but has become an introspective neurasthenic invalid. No. 43 is much better and able to work, although she says she is not well. No. 54 is better and in fair health, but she was very ill and had to have the isthmus divided to relieve dyspnœa. It will be noticed that many of those who did only moderately well had some other disease besides exophthalmic goitre, or that they did not rest as they were told.

Two of the five cases that are grouped as not doing well are somewhat better and the other three refused treatment.

I think you will agree with me that these cases show that if we follow the after-histories of exophthalmic goitre they teach that the great majority of the cases do well. The private cases are seen by the table to have done better than the hospital cases, but really much better than the figures in the table show, for we have seen that the mortality is higher among the hospital than among the private cases. The private cases probably do better than the hospital cases because they are better able to rest.

I have classified my cases into (*a*) mild or average, (*b*) severe, and (*c*) very severe. The table of results shows that 26 hospital cases and 35 private cases had done well. Now of the hospital cases that had done well 18 were mild or average, 7 were severe, 1 very severe; and of the 35 private cases that have done well 18 were mild or average, 9 were severe, and 8 were very severe. These figures are of great interest, for they show that more severe and very severe cases get well in private than in hospital practice, thus quite confirming the conclusion we had previously reached that the outlook for sufferers from the disease is better in private than hospital practice.

TREATMENT.

The last part of the subject which I propose to discuss this evening is treatment. I have notes of 11 cases in which operations have been performed upon the thyroid gland with a view of benefiting exophthalmic goitre. Of these cases four patients died as an immediate result of the operation. The first, a woman aged 30, had the disease to an average degree, but was anxious for operation as the disfigurement prevented her from following her occupation as a barmaid. The right lobe of the thyroid was removed; the next day she became very excitable and nervous; the temperature rose to 103° F., the pulse became very fast, and she died. The second patient, a woman aged 19, had the right lobe and isthmus excised. She died on the day after operation. The third patient, a woman aged 29, had both superior thyroids tied. Later, under the attempt to tie the inferior thyroid, she suddenly died. The fourth case was that of a young woman who died on the operating table just as the operation of removing the left lobe was being completed. Seven patients who were operated upon did not die. The first had one lobe removed; she says (five years after the operation) that she is better. The second had the right lobe removed six years ago. Now she says that she is fairly well and is better for the operation. The third had the left lobe and isthmus removed. She says that she received great benefit, but that now she is "very bad at times." The fourth had the right lobe removed, and is now perfectly well. The fifth had the left lobe removed, and she reports herself as being better but by no means well. The sixth had the left lobe removed. She was then better for a time, but the right lobe began to enlarge enormously and she again had all the symptoms of exophthalmic goitre to an extreme degree. The seventh was better for the removal of the right lobe, but 16 years after the report is: "Distinctly better; no exophthalmos; some tachycardia and palpitation. Nervous symptoms much the same. Still odd mentally." Of these 11 cases 9 were of average severity and 2 were severe; of the latter 1 died and 1 recovered.

The above proportion of 4 deaths out of 11 cases operated on is about the same as that given by Dr. Hector W. G. Mackenzie for similar operations at St. Thomas's Hospital. It must be specially remembered that this serious mortality of nearly 40 per cent. is an immediate mortality, some of the patients even dying on the operation table, the others within 24 hours of the operation. If the patients are not operated on, we have seen that there is no immediate danger in the great majority of cases, that the disease frequently gets quite well, and that the actual deaths among those with exophthalmic goitre are not very many greater than among healthy females. A further argument against operation is, as we have seen, that in several cases the patient is not cured by the operation.

It must be admitted, however, that in the hands of some surgeons doing many operations on the thyroid the mortality has been gradually brought down very much lower than the figures I have given. But to get the best results after operation those patients are selected who have not had the disease long, who have no lesions of other organs, and who have no mental symptoms. We have seen that if we exclude patients who are so ill that they die while in the hospital (and therefore are quite unsuitable for operation) and follow for some years the patients who are discharged from the hospital and those who are seen in private practice, the actual deaths among sufferers from exophthalmic goitre ill enough to go into the hospital or seek a second opinion are 15 as against 8 expected among healthy females, although these patients afflicted with exophthalmic goitre include severe and very severe cases, those with other diseases in addition, and those with mental symptoms. As, on the other hand, the cases selected for operation are chosen mostly from among the mild cases and a few die as an immediate result of the operation, it hardly seems likely that operations on the thyroid can diminish greatly the deaths that might, if the patients were not operated upon, be expected among such sufferers from exophthalmic goitre as are likely to be selected as suitable for having operations performed on their thyroid. It is, however, quite possible that operation may hasten the cure; if so, the justification for doing it will be greater among wage-earners than among others.

It would be of great interest if a large series of cases which have been operated on could be traced for many years after the operation, so that we might learn more about the rapidity of the improvement, the duration of it, and the number of deaths as contrasted with those that might be expected among a similar number of healthy females. This is particularly important, for if the thyroid, which after operation consists of one lobe, shrinks, it may be that this leads after years to a mild degree of symptoms due to insufficiency of thyroid secretion. At any rate, the cases here recorded show that many patients, even those severely ill, recover and remain well for years without any operation; and that those who decline operation can hardly be considered unreasonable, especially in this country, where the mortality from such operations is higher than in some others. Further, we have to bear in mind that we may sometimes be in error in attributing benefit to an operation for exophthalmic goitre, for we have already seen that some patients recover without any treatment, and so some operated upon might have done well even if no operation had been performed.

We have just learned that in some patients there is a natural tendency for the disease to get well, and therefore it is difficult to come to a precise opinion about other treatments than the operative, but my belief is that the most important is absolute rest in bed for many weeks. During the daytime the bed should, whenever possible, be out of doors, and if the weather permits, the patient may be out of doors at night, at any rate she should sleep with her windows wide open. Recently a woman with exophthalmic goitre also had typhoid fever, and it was of great interest to notice how much her exophthalmic goitre improved during the progress of the typhoid fever, presumably because of the enforced rest in bed. If after the patient has rested in one place for a few weeks she is moved to some different scenery, say from inland to where she can see the sea, this appears to hasten recovery. When she begins to get up she must do so very gradually and must be very careful of undue exertion.

Next to rest, the most important feature of treatment is food; most patients with exophthalmic goitre are thin, and they will improve as they gain in weight; plain, simple food, and plenty of it, is needed. They must not be worried, the rest must be tranquil, they must be spared the housekeeping and other domestic duties, and it is because private patients can, so much better than others, rest quietly that they do better. It is extremely hazardous to try to estimate the value of drugs for this disease. Lately I have often given Moebius's anti-thyroid serum. It may be given in milk, five minim doses to begin with, but rapidly increased to 30 minims, three times a day. It has appeared to do good, and some patients think they are better for it, but certainly other patients do just as well without it. Its cost is an objection. Rodagen, a white powder consisting of the dried milk of goats whose

thyroid has been removed, is often prescribed; it probably acts, if it acts at all, in the same way as Moebius's serum. If the patients are very restless and excitable, it is of the utmost importance that they should be kept quiet, and in extreme cases hyoscine is certainly the best drug for this. I remember seeing a man, aged 30, who had acute exophthalmic goitre following influenza; he had great tremor, was extremely restless and sleepless, and so ill that it was thought he would die. After a subcutaneous injection of hyoscine, 1/100 grain, he slept for the first time for a long while, and ultimately got quite well. For less severe cases paraldehyde is very useful, and for still less severe cases I usually prescribe bromides. If there is much tachycardia it seems only natural to give digitalis, and sometimes the patient seems better for it. The anæmia from which patients suffer usually passes away as they improve.

(Readers who wish for the details of each of the cases here mentioned will find them in the *Quarterly Journal of Medicine*, Vol. iv., No. 13.)

A Post-Graduate Clinic

ON

RECURRING ARTERIAL HYPERTONUS IN GRANULAR KIDNEY AND IN MIGRAINE.

Delivered in the Royal Infirmary, Edinburgh, on Sept. 6th, 1910,

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GENTLEMEN,—There are two patients in the adjoining ward whom you will have the opportunity of seeing and examining for yourselves after I have given you an account of the clinical phenomena which have been noted in them during the time they have been in the ward.

GRANULAR KIDNEY.

CASE 1.—The patient is 52 years of age. She has had a checkered life, has been in this infirmary and in the workhouse hospital on more than one occasion for various ailments, and she frankly acknowledges to having been "fond of a good big dram." The details of such a life do not require to be dwelt upon; the results of it at 52 years of age are illustrative of a large group of cases, not all, however, presenting a personal and social history of hard work, poverty, ill-treatment, and bad habits. The patient was admitted on June 10th, 1910. She stated that for some weeks she had been breathless, especially on going upstairs, while latterly it was continuous; she also suffered from attacks of dizziness; her legs also at times became weak and shaky, and she had difficulty with her speech at times—she stammered and could not get the words out. She sought advice at the Cowgate Dispensary, was recommended to the infirmary, and was admitted under my care.

On admission the pulse was 80, the respirations were 24, the temperature was 97° F., and the brachial pressure was 295 mm. Hg. She was kept in bed, put on milk diet, and was given a dose of Henry's solution at night. The radial artery was thickened, but did not give the impression of anything like the pressure given by the brachial. The heart dulness at the apex was in the nipple line; the sounds were clear and slapping, and there was no murmur. The lungs were emphysematous but otherwise normal. The urine had a specific gravity of 1017, and showed a faint trace of albumin. The blood count and the amount of hæmoglobin were normal. The bowels moved once or twice daily. By the 14th the pressure had fallen to 185 mm. Hg. She was then given 5 grains of potassium iodide three times a day. On the 18th the pressure had fallen to 165 mm. and she was allowed light diet, which includes chicken and fish. From that date to July 2nd the pressure varied from 165 to 210 mm.—the level being somewhat higher after the increase in her diet than before that. On the forenoon of July 4th she was not so well, and, when I saw her, her face was flushed, she was propped up in bed with pillows, she looked dazed, and when spoken to could not articulate; the pulse was rather over 100, the respirations were 24 and laboured, and the brachial pressure had risen to 268 mm. She was given erythrol at once, and at night had a dose of mannitol. She rapidly regained her ordinary condition, had a good night, and next morning the pressure had fallen to 190 mm., and she felt in her usual health. On August 12th, with her pressure only at 202 mm., she complained of headache, a tingling sensation in the right limbs, right side of the trunk, and in the corresponding side of the tongue. These sensations continued, and she was given erythrol. On the 14th the pressure was 186 mm. On the 30th the patient was noted to be particularly well in the morning, but at about 6 P.M. she became restless; at 7.30 she complained of violent pain in the head, was breathless, and had difficulty in articulation; at 8.15 the pressure was 258 mm. and she was given erythrol; and at 9.30 the pressure had fallen to 207 mm., and as she was drowsy she was not disturbed again, and she soon fell asleep. The following morning the pressure had fallen to 175 mm., and since then she has been in her usual condition, the pressure keeping about 200 mm.

The course of the pressure may be tabulated thus:—

June 10th	... ... 295 mm. Hg.	August 14th	... ... 186 mm. Hg
,, 11th	... ... 230 ,,	,, 30th (8.15 P.M.)	258 ,,
,, 18th to July 2nd	...165–210 ,,	,, ,, (9.30 P.M.)	207 ,,
,, 4th	... ... 268 ,,	,, 31st	... ... 175–185 ,,
,, 5th	... ... 190 ,,	Sept. 1st	... ... 204–207 ,,
August 12th	... ... 202 ,,	,, 3rd	... ... 208–212 ,,

June 10th, July 4th, and August 12th and 30th were the dates of the attacks.

This patient is suffering from the effects of granular kidney and extensive arterial change, and I bring her case before you to illustrate the clinical lessons such a case supplies, and to impress upon you some points which it is of the first importance for our patients that we should understand the true significance of and be able to treat intelligently, and then, happily, successfully up to a certain point.

You will note that this woman on admission had a vessel pressure of 295 mm. Hg, one of the highest pressures I have had in this ward, and that rest in bed, the administration of a saline purge, milk diet, and later 5 grains of potassium iodide thrice daily brought the pressure down from 100 to 130 mm. During the period she has been in hospital she has sometimes shown symptoms which are classed as uræmic, such as restlessness, incoherence, dyspnœa; at other times, symptoms that are regarded as premonitory of cerebral hæmorrhage or cerebral softening from local anæmia or thrombosis, such as tingling in one-half of the body, confusion of thought, difficulty in articulation, even loss of articulate speech. She has had several minor manifestations in one or other of those directions; but she has had two or three graver attacks, in the first of which I was fortunate enough to see her and at once to recognise its nature. In all these attacks I ask your attention to the fact that the pressure showed a great rise—a rise which would doubtless have risen still higher had it not been arrested by therapeutic interposition. With such interposition, however, the pressure fell, as on July 4th, from 268 to 190, and on August 30th from 258 to 175 mm. With the fall of pressure all the urgently alarming symptoms disappeared; in fact, the arrest of its upward movement, and a fall even of 15 or 20 mm. brought visible relief to the symptoms, and this was effected in a remarkably short space of time. The association of a marked rise in hæmomanometer reading with such symptoms as I have indicated is in my experience always to be noted.

Neither the ordinary pressure nor the rise in pressure in these cases can always be estimated correctly by the finger on the radial artery. None of you would guess from this patient's radial artery that the pressure would be as high as it is; indeed, those of you who study blood pressure by the finger will think that it is even lower than normal. I entirely agree with those of you who may think so. The finger, I hold, is the only means by which you can estimate true blood pressure. True blood pressure to the clinician means the power of the left ventricle, and nothing else, as that can be estimated by the finger on an artery. The hæmomanometer reading, on the other hand, is only in part the result of blood pressure. The patient we are considering has

a variation in her hæmomanometer reading from 295 to 165—a margin of 130 mm., and certain eminent persons would ask us to believe that this is the margin of power in this woman's left ventricle, a margin which no healthy man in this room possesses. But I do not propose to argue this point: I have done that in other places. I merely state that this great margin of pressure, that these great variations in pressure, indicate to us the condition of the arterial wall—the degree of hypertonic contraction, or of relaxation of it. The armlet being applied to the upper arm gives us the condition of the brachial artery, which every now and again differs greatly from the bit of radial artery to be felt at the wrist. This observation as to the state of the brachial artery, added to your examination of the radial artery and pulse, you will find a great help in estimating correctly the state of the circulation in your patients.

Let me repeat that in this patient we had, and will have again, symptoms of uræmia, and symptoms which presage cerebral softening or hæmorrhage; that when these threatenings are present the hæmomanometer reading is found to have risen many millimetres. My contention is that the raised reading is due to hypertonic contraction of the artery from which the reading is taken. The symptoms are associated definitely with this phenomenon, for the moment you arrest the constrictive action the symptoms begin to disappear, and altogether disappear with the cessation of the hypertonus and the consequent fall in the hæmomanometer reading.

To you as graduates in medicine I need not labour to prove the great value, therefore, of this instrument, if you use it aright and interpret its readings correctly. I shall only ask you to realise what the phenomena are which are commonly recognised as presaging paralysis, hemiplegia being the commonest, associated or not with aphasia. Very many of these cases are preceded for days or for longer periods by recurring sensations of numbness or tingling, by temporary slight loss of power in a hand, an arm, a leg, difficulty in articulation, temporary loss of speech, feeling of mental confusion, temporary loss of memory, and so on. All these you will find associated with arterial hypertonus and a high hæmomanometer reading. The nervous phenomena can only be explained by the participation of the vessels in varying parts of the brain in a constriction in which the whole systemic circulation is affected. These local angiospasms in the brain lead to anæmia of the areas involved, the clinical phenomena being referrable to the areas so affected. The angiospasm in brain areas favours thrombosis, and its consequent deplorable brain softening, or leads to hæmorrhage on the heart side of the region of spasm.

Now I unhesitatingly assert that if these phenomena are duly observed, correctly correlated and interpreted, you have it in your power in many instances to save your patients from disaster, preventing their being deprived of the power of locomotion, of speech, of mental power, perhaps for years longer than would otherwise be the case.

The patient who is the text of these remarks is but one of many similar cases I could describe to you. I am glad that a case of the kind happens to be in the ward at present, so that you may see the case and note the difference between the radial pulse and the high pressure required to obliterate the brachial artery, and realise that this simple instrument, the hæmomanometer, is really a great help in your every-day medical work if you use it as a guide to the state of the vessel wall more than as a guide to blood pressure, although in other classes of cases it can even help you in judging of that.

MIGRAINE.

CASE 2.—The second case to which I ask your attention is also of interest, although not of such urgent importance as the preceding one. The patient, a woman aged 49 years, was sent to me in May, 1909, by Dr. W. C. McEwan of Prestonpans as she was suffering from migraine, having an attack almost every week, the attack lasting three or four days. At that time the radial artery was small and wiry and the brachial pressure 150 mm. Hg. The bowels were constipated, the tongue coated, the breath offensive, and there was a trace of albumin in the urine, which also showed much indican. I advised that she should have a laxative pill nightly of cascara, belladonna, and nux vomica, and iodide of potassium thrice daily. Under this treatment she improved, but as the attacks returned she was again sent to see me and was admitted into the adjoining ward on August 12th, 1910. On admission the pressure was 205 mm. She was treated with enemata to unload the bowel and got a colocynth and hyoscymus pill to keep the bowels moving. Under this treatment and rest in bed the pressure fell and kept between 164 and 172 mm. On August 21st the pressure was 164 mm. On the 23rd, in the evening, she complained of headache, vomited twice, and she knew that one of her attacks had begun. She vomited several times during the night. On the 24th her condition was unchanged, she vomited twice, and the pressure was 192 mm. On the 25th her condition still remained the same, and the pressure was 194 mm., when she was given a quarter of a grain of erythrol, the hour being 12.25 P.M.; by 12.55 the pressure had fallen to 142 mm.; by 1.50 it had risen to 168 mm., and by 7.45 to 179 mm. On this date (the 25th) she vomited six times between 1.30 P.M. and 9 o'clock, and as her symptoms were not at all relieved by the fall of pressure produced by the erythrol the drug was not repeated. On the 26th the headache was much less and the vomiting had stopped. The attack had lasted part of three days. On the 27th there was neither headache nor sickness, and the pressure had fallen to 138. On Sept. 1st the pressure was reported as rising steadily and had reached 172. The patient thought she was to have another attack, as she had a feeling of fulness in the right arm, a symptom she had noticed previously as indicating the approach of an attack. On the 2nd, in the morning, headache began, and at 10.30 A.M., when I saw her, the pressure was 203. I ordered 10 grains of phenacetin every hour for three times. At 1 P.M., the pressure being still 203 mm., she was given the first dose; at 1.45 the pressure was 187 mm. and the headache was slightly relieved; at 2.30 she was given the second dose, and at 2.45 the pressure was 184 mm. and the headache continued relieved; at 3.30 she was given the third dose, and at 4 o'clock the headache was distinctly better and the pressure was 178 mm.; at 7 P.M. the headache was much better and the pressure was 178 mm. There was no vomiting and the patient had a good night, sleeping soundly. The following morning, Sept. 3rd, she expressed herself as feeling quite well and the pressure had fallen to 158 mm. She has remained well down to the present.

The course of the hæmomanometer readings may be tabulated thus:—

	May, 1909	150 mm. Hg.			
	August 12th, 1910...	205	,,		
	,, 13th–20th ,, ...	198–165	,,		
	,, 21st ,, ...	164	,,		
	,, 24th ,, ...	192	,,		
Attack	,, 25th ,, ...	194	,, ...	12.25 P.M.,	erythrol.
		142	,, ...	12.55 ,,	
		168	,, ...	1.50 ,,	
		179	,, ...	7.45 ,,	
	,, 27th ,, ...	138	,,		
	Sept. 1st ,, ...	172	,,		
Attack	,, 2nd ,, ...	203	,, ...	10.30 A.M.	
		203	,, ...	1.0 P.M.,	phenacetin.
		187	,, ...	1.45 ,,	
		184	,, ...	2.30 ,,	phenacetin.
		184	,, ...	2.45 ,,	
			,, ...	3.30 ,,	phenacetin.
		178	,, ...	4.0 ,,	
	,, 3rd ,, ...	158	,, ...	morning.	

August 24th and Sept. 1st are the dates of two attacks—the first treated with erythrol and the second with phenacetin.

This case raises various questions which cannot at present be discussed. Some of these questions are: Are the attacks primarily of nervous origin, and if so are they neurasthenic or epileptoid? Are they nervous manifestations of early cirrhotic kidney? Or are they the result of a primary auto-intoxication due to some error in metabolism, or to the retention of some product not being regularly excreted? We are engaged in the investigation of the urine with a view to the possible determination of this last question, but meanwhile we have not got far enough to entitle me to speak about it. I bring the case before you as showing the interest that is attached to hæmomanometer observations, and that the instrument is well deserving of a place in ordinary medical work. In this patient I have shown that her attacks are associated with a marked rise in hæmomanometer readings, but it would appear that the mere reduction of pressure, as in the attack beginning on August 23rd, did not modify the course of the attack in any way. It may be that had the erythrol been

given sooner and been persevered with the result might have been different. However that may be, the difference between that attack and the attack on Sept. 2nd, which was at once treated with phenacetin, is very striking; in it the symptoms were promptly arrested and aborted, and along with that there was in three hours a fall in pressure of 25 mm. By the following morning a fall of 45 mm. had occurred, accompanied by the relief of all the symptoms. In this attack headache was arrested and vomiting was prevented by the administration of phenacetin, the drug above all others that arrests migraine.

Since the above was written this patient has left hospital. She left on Oct. 15th, having passed nearly a month without an attack, although in that time she had two threatenings of attacks, which have been designated in the subjoined table "abortive attacks." These abortive attacks were characterised by a feeling of drowsiness and by urine changes as indicated below. The examinations of the urine which were being carried out as mentioned above have been completed. They are given below and form an interesting contribution to the question of chloride excretion in migraine; they show a relationship between the migrainous attack, the occurrence of polyuria, and the discharge of a large quantity of chloride followed by a big drop in chloride excretion.

Amount of Urine and Chlorides Excreted in relation to Attacks of Migraine in Case 2.

	Date.	Oz.			
	Aug. 29th	30			
	,, 30th	34			
	,, 31st	87			
Attack.	Sept. 1st	72	10·2	grammes	total chlorides.
Attack.	,, 2nd	87	16·2	,,	,,
	,, 3rd	48	None.		
	,, 4th	42	0·49	gramme	total chlorides.
	,, 5th	50			
	,, 6th	108			
	,, 7th	—			
	,, 8th	105	23·46	grammes	chlorides.
Attack.	,, 9th	34	0·286	,,	,, (vomit 44 oz.).
Attack.	,, 10th	17	0·376	,,	,, (vomit 11 oz.).
	,, 11th	38	1·60	,,	,,
	,, 12th	28	None.		
	,, 13th	69	0·34	grammes	chlorides.
	,, 14th	64	1·07	,,	,,
	,, 15th	100	7·76	,,	,,
Attack.	,, 16th	40	3·88	,,	,, (vomit 8 oz.).
Attack.	,, 17th	37	9·4	,,	,, (,, 7½ ,,).*
	,, 18th	34	1·07	,,	,,
	,, 19th	20	0·23	,,	,,
	,, 20th	29	1·8	,,	,,
	,, 21st	53	1·5	,,	,,
Abortive attack.	,, 22nd	124	11·2	,,	,, (no vomiting).
	,, 23rd	52	4·3	,,	,,
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	,, 26th	78	8·2	,,	,,
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* Containing 6·5 grammes chloride.

The patient left the hospital on Oct. 15th, not having had any more attacks.

I have to express my indebtedness to my residents, Dr. R. W. Lang Todd, Dr. T. Welsh, and Dr. A. L. Taylor, for their watchful interest in these cases.

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ON THE

DIAGNOSIS AND TREATMENT OF CYSTIC DISEASE OF THE BREAST.

Delivered before the Harveian Society of London on Oct. 27th, 1910,

BY D'ARCY POWER, F.R.C.S. ENG.,

SURGEON TO, AND LECTURER ON SURGERY AT, ST. BARTHOLOMEW'S HOSPITAL.

MR. PRESIDENT AND GENTLEMEN,—When you invited me to select a subject for discussion here to-night I turned over in my mind the various cases which have come under my notice as a surgeon to one of the large teaching hospitals in London. I quickly arrived at the conclusion that cystic tumours of the breast often gave me trouble both to diagnose and to treat, and I was vain enough to think that what proved difficult to me might have proved equally difficult to others. I have therefore chosen to bring this subject before you in the hope of obtaining a full discussion. Such cases are not rare, and it is the essence of a good discussion that it should be upon a topic with which everyone is familiar.

CLASSIFICATION.

The classification of cystic disease of the breast is chaotic, and I would therefore submit the following classification for your consideration and approval, not because I believe it to be perfect but in the hope of obtaining some kind of order:—

(A) *Non-inflammatory.*		
(*a*) Innocent.	(I.) Adenoma.	(i.) Ducts.
		(ii.) Acini.
	(II.) Fibroma.	(i.) Pericanalicular.
		(ii.) Intracanalicular.
(*b*) Malignant.	(I.) Carcinoma.	(i.) Duct papilloma.
		(ii.) Duct carcinoma.
	(II.) Sarcoma.	(i.) Cystic.
		(ii.) Degenerating.
(B) *Inflammatory.*		
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		(ii.) Cysts multiple.
(C) *Congenital.*	Lymphangioma.	
(D) *Parasitic.*	Hydatid.	

(A) NON-INFLAMMATORY CYSTS.

(*a*) *Innocent cystic tumours.*—Everyone recognises the existence of cystic adenomata as one of the commoner forms of innocent tumour occurring in the breast. The actual structure differs in different tumours. It is sometimes, but rarely, pure glandular tissue of an imperfect type held together by a little areolar tissue, the glandular tissue being sometimes chiefly acinous and in other cases chiefly tubular. Much more frequently the glandular elements are scattered in a stroma of fibrous connective tissue and the tumour is then called a cystic fibro-adenoma. Here are two examples of such a tumour, the first of which is almost typical:—

CASE 1.—An unmarried woman, aged 21 years, had accidentally noticed a lump in her breast six months previously. It was small at first but had doubled in size before she sought advice. Her breast ached a little, but never enough to be troublesome. Examination showed that both breast and nipple looked natural. The hand laid flat upon the left breast felt a rounded swelling which measured about an inch in diameter. The swelling was hard and nodular, well defined, and painless. It floated, that is to say it moved freely, not only beneath the skin and upon the pectoral fascia, but in the substance of the breast itself. A small incision radiating from the nipple allowed the tumour to be removed with the greatest ease. The tumour appeared to the naked eye as an irregular mass of glandular tissue from the edges of which projected small cysts filled with transparent yellowish fluid. Microscopically it was a fibro-adenoma consisting of glandular acini in a stroma of fibrous tissue.

CASE 2.—A married woman, aged 30 years, had first noticed a lump in her left breast seven months previously, her attention being drawn to it by accident. The swelling had increased a little in size, but she came for advice because it was beginning to be painful after she had used her arm. Examination of the breast showed that it contained a rounded swelling measuring half an inch across and divided into two lobules. The swelling was freely moveable in the breast, and there was no enlargement either of the axillary or the supraclavicular glands. The tumour was removed by simple incision and proved to be a cystic fibro-adenoma.

The secret of removing these tumours lies in making the assistant press them up closely beneath the skin and then cutting down upon them until the capsule of the adenoma is reached. I have sometimes seen them very badly removed by those who have failed to appreciate the necessity for cutting cleanly through the breast tissue before any attempt is made to enucleate the tumour.

It is not necessary to remove every adenoma of the breast, but it is better to do so in those who are unable to bear with equanimity the thought of having a tumour in the breast, in those who have a strong family history of cancer, when the tumour grows rapidly and when it is really painful.

Cystic fibroma.—Cystic fibroma of the breast occurs in two forms, and the name of Sir Benjamin Brodie's disease of the breast is sometimes given to it. A more intimate knowledge of the pathology and microscopical structure has enabled us to subdivide Brodie's disease into an innocent form—cystic fibroma—and a malignant form—cystic sarcoma. Cystic fibroma of the breast may be further subdivided into pericanalicular fibroma and intracanalicular fibroma. Both forms are characterised by an overgrowth of connective tissue starting either in the stroma round the ducts and acini—the pericanalicular form—or in the subepithelial tissue of the ducts themselves—the intracanalicular variety. Both tumours are associated with the formation of numerous cysts which are filled at first with serous fluid. The cysts, therefore, are due in all probability to obstruction of the glandular tissue, although in some cases there is microscopical evidence that the glandular epithelium has itself undergone cystic degeneration. The cyst wall in the pericanalicular form is often invaginated by the new growth of fibrous tissue until the cyst becomes a mere slit, and the tumour appears to be solid on section until a probe is passed into the slits, when the invaginating growth can be turned out and the cyst demonstrated.

In the intracanalicular form the cyst remains obvious and the growth sprouts into it in the form of a duct papilloma.

CASE 3.—This is a section through a large and lobulated pericanalicular fibroma of the breast. The cysts are very large and are filled with a firm growth. It will be noticed that, although the growth fills the cysts in such a manner as to make the section appear solid, it is in each case a mere approximation of the cyst wall and it can readily be turned out to show its independence of the cysts. Microscopically the tumour is a true pericanalicular fibroma. The breast was removed from a married woman, aged 52 years, who first noticed a small lump in her breast ten years before amputation was performed. The tumour began to grow two years after it was first noticed, but during the last three years the rate of growth had increased rapidly.

CASE 4.—The following is a good instance of the intracanalicular cystic fibroma, which was recently under my observation. An unmarried lady, aged 55 years, came to see me in August, 1909, saying that six weeks ago she had first noticed a little blood-stained discharge coming from her left nipple. Three weeks later the discharge, which was clear and blood-stained at first, became thick and made her linen stiff when it dried. Careful examination showed the breast to be healthy except at one spot just to the outer side of the nipple where there was a slightly thickened patch which was not tender on pressure. There was no enlargement of the axillary glands. I made a diagnosis of duct papilloma, but rather dissuaded the patient from any operation as she had lately suffered from several attacks of angina pectoris. I told her to come and see me again in two months' time unless any marked change took place in the interval. She returned on Oct. 8th saying that the discharge had neither increased in quantity nor altered in quality, though my examination of the breast at the previous visit had been followed for a few days by a little more bleeding than usual. I again temporised, but on Oct. 25th the breast suddenly increased in size without any apparent cause. It became red and tender, so I determined to remove it at all risks. I amputated the breast on the 27th, and subsequent examination showed a papillomatous growth of about the size of a pea projecting into a cyst filled with blood-stained and purulent fluid. The cyst was surrounded by an extensive area of thickened tissue. The axillary glands were unaffected.

The following report was afterwards received from the Clinical Research Association: "This is an inflammatory lesion of the breast with much induration, as well as some recent and acute changes round the ducts. We may conclude, therefore, that it is a simple chronic infection as there is no evidence of tubercle. There is a fair-sized duct papilloma in one place, but it is well encapsuled and there is no evidence of malignant growth."

CASE 5.—A married woman, aged 45 years, first noticed a lump in her breast ten years ago. It was then as large as a pea, and there was an occasional discharge of a few drops of yellowish but inoffensive fluid. The swelling gradually increased in size, but during the last six years there had been no discharge. The increase in size was attended with pain. The patient had been married for 25 years, but had neither had children nor miscarriages. Examination showed a rounded and slightly lobulated swelling occupying the inner half of the left breast. The skin over the swelling was freely moveable and was not altered in character, except that it contained a single enlarged vein. The tumour was not attached either to the skin or to the deeper tissues. It gave the sensation of a tense fluid swelling. The right breast was normal. The swelling was removed on May 3rd, 1910, and the patient left the hospital on May 19th with the wound soundly healed.

The tumour is preserved in the Museum of St. Bartholomew's Hospital (No. 3146 *b*) with the following description: "Part of a female breast showing a cystic duct papilloma with intracystic growths. A piece of skin, including part of the nipple, forms the anterior aspect of the specimen. Beneath it is a cyst measuring about half an inch in diameter. The cyst is thin-walled and was not adherent to the skin. Its inner aspect is roughened by a granular deposit of blood-stained débris. Two intracystic papillary growths are seen at one extremity of the cyst, to the wall of which they are attached by delicate pedicles. The cyst contained bloody fluid when it was fresh. Microscopical examination shows the intracystic growth to be a duct papilloma."

The connective tissue stroma in the intracanalicular forms of cystic adenoma may itself undergo secondary changes, as happened in the following case:—

CASE 6.—A married woman, aged 45 years, was admitted under my care at St. Bartholomew's Hospital on May 29th, 1910, complaining of a painful tumour in the left breast. The swelling had been noticed for the last 20 months. It was painless at first, but five months before she sought advice it began to grow and was painful. There was no history of any injury. Examination of the breast showed a diffuse and rounded prominence over the left nipple which proved on palpation to be a tense and lobulated swelling which was not attached either to the skin or to the underlying tissues. There was a small painless swelling in the left axilla which had only been noticed for three days. The breast was explored on May 20th and a thin-walled cyst filled with brownish fluid was dissected out. Subsequent examination showed that it contained a vesicular mass which seemed to be of a colloid nature.

The specimen was sent to the museum where it is preserved (No. 3146*k*) with the following description: "A cystic papilliferous fibro-adenoma. The tumour is globular and multilocular, measuring 2 inches in diameter. A quantity of gelatinous papillary growth springs from the inner wall of the main cavity of the cyst, which it fills completely. Microscopical examination shows that the gelatinous outgrowths are composed of myxomatous tissue covered by flattened epithelium. The cyst wall is fibrous and contains spaces lined by epithelium similar to that which covers the papillary growths."

(*b*) *Malignant cystic tumours.*—Malignant cystic disease attacks the same parts of the breast as cystic fibroma. It occurs, therefore, in the two forms of cystic sarcoma and duct cancer, the sarcoma corresponding with pericanalicular cystic fibroma, duct cancer being the correlative of the intracanalicular non-malignant forms.

Cystic sarcoma of the breast is at first a well-circumscribed swelling which grows in the same manner as sarcoma in other parts of the body. The cysts, however, are constituent parts of the growth and are not mere degeneration products due to retrograde changes in the newly formed sarcomatous tissue. The cases are not very common, but here is a good example which came under my observation when I was acting as house surgeon to Sir William Savory, who spoke of it by the name under which it was known to Sir Benjamin Brodie himself as a sero-cystic sarcoma.

CASE 7.—A married woman, aged 37 years, the mother of nine children and four months pregnant, was admitted into Lucas Ward at St. Bartholomew's Hospital on March 12th, 1883, with a tumour rather larger than an egg in the upper part of the left breast. The swelling had been first noticed three months previously and it was then the size of a walnut. On examination it was found to occupy the upper segment of the breast near the periphery. It was moveable and bossed; fluctuation could be felt distinctly. The swelling did not extend to the nipple, but was connected with it by indurated bands. There was no serous discharge from the nipple and there were no enlarged axillary glands. One of the fluctuating parts of the tumour was punctured with a grooved needle on March 13th and about two ounces of clear fluid escaped. An incision was made into the tumour on March 24th and clear fluid again escaped. The incision never closed and there was a constant oozing of serous fluid from it. The patient left the hospital at her own wish on April 13th and was readmitted on May 15th, saying that she had suffered much pain in her breast, which was always wet, and that something had grown out of the wound. Examination showed that the left breast was much larger than before, the skin over it was tense and red, whilst the whole gland was harder than natural. A large fungating mass was growing from the site of the incision and there was a constant oozing discharge of clear serous fluid. The patient otherwise was in excellent health. The breast was removed on May 19th and the patient left the hospital with the wound soundly healed on June 8th. Subsequent examination showed that the breast contained a cyst as large as an orange embedded in a mass of sarcomatous tissue.

These cystic sarcomata of the breast must not be confused with sarcomata in which cysts are produced as a result of degenerative changes. The following is a good example of a case of degenerating sarcoma:—

CASE 8.—A married woman, aged 51 years, was admitted under my care on June 2nd, 1907, complaining of a painful lump in her left breast.

given sooner and been persevered with the result might have been different. However that may be, the difference between that attack and the attack on Sept. 2nd, which was at once treated with phenacetin, is very striking; in it the symptoms were promptly arrested and aborted, and along with that there was in three hours a fall in pressure of 25 mm. By the following morning a fall of 45 mm. had occurred, accompanied by the relief of all the symptoms. In this attack headache was arrested and vomiting was prevented by the administration of phenacetin, the drug above all others that arrests migraine.

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(A) NON-INFLAMMATORY CYSTS.

(*a*) *Innocent cystic tumours.*—Everyone recognises the existence of cystic adenomata as one of the commoner forms of innocent tumour occurring in the breast. The actual structure differs in different tumours. It is sometimes, but rarely, pure glandular tissue of an imperfect type held together by a little areolar tissue, the glandular tissue being sometimes chiefly acinous and in other cases chiefly tubular. Much more frequently the glandular elements are scattered in a stroma of fibrous connective tissue and the tumour is then called a cystic fibro-adenoma. Here are two examples of such a tumour, the first of which is almost typical:—

CASE 1.—An unmarried woman, aged 21 years, had accidentally noticed a lump in her breast six months previously. It was small at first but had doubled in size before she sought advice. Her breast ached a little, but never enough to be troublesome. Examination showed that both breast and nipple looked natural. The hand laid flat upon the left breast felt a rounded swelling which measured about an inch in diameter. The swelling was hard and nodular, well defined, and painless. It floated, that is to say it moved freely, not only beneath the skin and upon the pectoral fascia, but in the substance of the breast itself. A small incision radiating from the nipple allowed the tumour to be removed with the greatest ease. The tumour appeared to the naked eye as an irregular mass of glandular tissue from the edges of which projected small cysts filled with transparent yellowish fluid. Microscopically it was a fibro-adenoma consisting of glandular acini in a stroma of fibrous tissue.

CASE 2.—A married woman, aged 30 years, had first noticed a lump in her left breast seven months previously, her attention being drawn to it by accident. The swelling had increased a little in size, but she came for advice because it was beginning to be painful after she had used her arm. Examination of the breast showed that it contained a rounded swelling measuring half an inch across and divided into two lobules. The swelling was freely moveable in the breast, and there was no enlargement either of the axillary or the supraclavicular glands. The tumour was removed by simple incision and proved to be a cystic fibro-adenoma.

The secret of removing these tumours lies in making the assistant press them up closely beneath the skin and then cutting down upon them until the capsule of the adenoma is reached. I have sometimes seen them very badly removed by those who have failed to appreciate the necessity for cutting cleanly through the breast tissue before any attempt is made to enucleate the tumour.

It is not necessary to remove every adenoma of the breast, but it is better to do so in those who are unable to bear with equanimity the thought of having a tumour in the breast, in those who have a strong family history of cancer, when the tumour grows rapidly and when it is really painful.

Cystic fibroma.—Cystic fibroma of the breast occurs in two forms, and the name of Sir Benjamin Brodie's disease of the breast is sometimes given to it. A more intimate knowledge of the pathology and microscopical structure has enabled us to subdivide Brodie's disease into an innocent form—cystic fibroma—and a malignant form—cystic sarcoma. Cystic fibroma of the breast may be further subdivided into pericanalicular fibroma and intracanalicular fibroma. Both forms are characterised by an overgrowth of connective tissue starting either in the stroma round the ducts and acini—the pericanalicular form—or in the subepithelial tissue of the ducts themselves—the intracanalicular variety. Both tumours are associated with the formation of numerous cysts which are filled at first with serous fluid. The cysts, therefore, are due in all probability to obstruction of the glandular tissue, although in some cases there is microscopical evidence that the glandular epithelium has itself undergone cystic degeneration. The cyst wall in the pericanalicular form is often invaginated by the new growth of fibrous tissue until the cyst becomes a mere slit, and the tumour appears to be solid on section until a probe is passed into the slits, when the invaginating growth can be turned out and the cyst demonstrated.

In the intracanalicular form the cyst remains obvious and the growth sprouts into it in the form of a duct papilloma.

CASE 3.—This is a section through a large and lobulated pericanalicular fibroma of the breast. The cysts are very large and are filled with a firm growth. It will be noticed that, although the growth fills the cysts in such a manner as to make the section appear solid, it is in each case a mere approximation of the cyst wall and it can readily be turned out to show its independence of the cysts. Microscopically the tumour is a true pericanalicular fibroma. The breast was removed from a married woman, aged 52 years, who first noticed a small lump in her breast ten years before amputation was performed. The tumour began to grow two years after it was first noticed, but during the last three years the rate of growth had increased rapidly.

CASE 4.—The following is a good instance of the intracanalicular cystic fibroma, which was recently under my observation. An unmarried lady, aged 55 years, came to see me in August, 1909, saying that six weeks ago she had first noticed a little blood-stained discharge coming from her left nipple. Three weeks later the discharge, which was clear and blood-stained at first, became thick and made her linen stiff when it dried. Careful examination showed the breast to be healthy except at one spot just to the outer side of the nipple where there was a slightly thickened patch which was not tender on pressure. There was no enlargement of the axillary glands. I made a diagnosis of duct papilloma, but rather dissuaded the patient from any operation as she had lately suffered from several attacks of angina pectoris. I told her to come and see me again in two months' time unless any marked change took place in the interval. She returned on Oct. 8th saying that the discharge had neither increased in quantity nor altered in quality, though my examination of the breast at the previous visit had been followed for a few days by a little more bleeding than usual. I again temporised, but on Oct. 25th the breast suddenly increased in size without any apparent cause. It became red and tender, so I determined to remove it at all risks. I amputated the breast on the 27th, and subsequent examination showed a papillomatous growth of about the size of a pea projecting into a cyst filled with blood-stained and purulent fluid. The cyst was surrounded by an extensive area of thickened tissue. The axillary glands were unaffected.

The following report was afterwards received from the Clinical Research Association: "This is an inflammatory lesion of the breast with much induration, as well as some recent and acute changes round the ducts. We may conclude, therefore, that it is a simple chronic infection as there is no evidence of tubercle. There is a fair-sized duct papilloma in one place, but it is well encapsuled and there is no evidence of malignant growth."

CASE 5.—A married woman, aged 45 years, first noticed a lump in her breast ten years ago. It was then as large as a pea, and there was an occasional discharge of a few drops of yellowish but inoffensive fluid. The swelling gradually increased in size, but during the last six years there had been no discharge. The increase in size was attended with pain. The patient had been married for 25 years, but had neither had children nor miscarriages. Examination showed a rounded and slightly lobulated swelling occupying the inner half of the left breast. The skin over the swelling was freely moveable and was not altered in character, except that it contained a single enlarged vein. The tumour was not attached either to the skin or to the deeper tissues. It gave the sensation of a tense fluid swelling. The right breast was normal. The swelling was removed on May 3rd, 1910, and the patient left the hospital on May 19th with the wound soundly healed.

The tumour is preserved in the Museum of St. Bartholomew's Hospital (No. 3146*b*) with the following description: "Part of a female breast showing a cystic duct papilloma with intracystic growths. A piece of skin, including part of the nipple, forms the anterior aspect of the specimen. Beneath it is a cyst measuring about half an inch in diameter. The cyst is thin-walled and was not adherent to the skin. Its inner aspect is roughened by a granular deposit of blood-stained débris. Two intracystic papillary growths are seen at one extremity of the cyst, to the wall of which they are attached by delicate pedicles. The cyst contained bloody fluid when it was fresh. Microscopical examination shows the intracystic growth to be a duct papilloma."

The connective tissue stroma in the intracanalicular forms of cystic adenoma may itself undergo secondary changes, as happened in the following case:—

CASE 6.—A married woman, aged 45 years, was admitted under my care at St. Bartholomew's Hospital on May 29th, 1910, complaining of a painful tumour in the left breast. The swelling had been noticed for the last 20 months. It was painless at first, but five months before she sought advice it began to grow and was painful. There was no history of any injury. Examination of the breast showed a diffuse and rounded prominence over the left nipple which proved on palpation to be a tense and lobulated swelling which was not attached either to the skin or to the underlying tissues. There was a small painless swelling in the left axilla which had only been noticed for three days. The breast was explored on May 20th and a thin-walled cyst filled with brownish fluid was dissected out. Subsequent examination showed that it contained a vesicular mass which seemed to be of a colloid nature.

The specimen was sent to the museum where it is preserved (No. 3146*k*) with the following description: "A cystic papilliferous fibro-adenoma. The tumour is globular and multilocular, measuring 2 inches in diameter. A quantity of gelatinous papillary growth springs from the inner wall of the main cavity of the cyst, which it fills completely. Microscopical examination shows that the gelatinous outgrowths are composed of myxomatous tissue covered by flattened epithelium. The cyst wall is fibrous and contains spaces lined by epithelium similar to that which covers the papillary growths."

(*b*) *Malignant cystic tumours.*—Malignant cystic disease attacks the same parts of the breast as cystic fibroma. It occurs, therefore, in the two forms of cystic sarcoma and duct cancer, the sarcoma corresponding with pericanalicular cystic fibroma, duct cancer being the correlative of the intracanalicular non-malignant forms.

Cystic sarcoma of the breast is at first a well-circumscribed swelling which grows in the same manner as sarcoma in other parts of the body. The cysts, however, are constituent parts of the growth and are not mere degeneration products due to retrograde changes in the newly formed sarcomatous tissue. The cases are not very common, but here is a good example which came under my observation when I was acting as house surgeon to Sir William Savory, who spoke of it by the name under which it was known to Sir Benjamin Brodie himself as a sero-cystic sarcoma.

CASE 7.—A married woman, aged 37 years, the mother of nine children and four months pregnant, was admitted into Lucas Ward at St. Bartholomew's Hospital on March 12th, 1883, with a tumour rather larger than an egg in the upper part of the left breast. The swelling had been first noticed three months previously and it was then the size of a walnut. On examination it was found to occupy the upper segment of the breast near the periphery. It was moveable and bossed; fluctuation could be felt distinctly. The swelling did not extend to the nipple, but was connected with it by indurated bands. There was no serous discharge from the nipple and there were no enlarged axillary glands. One of the fluctuating parts of the tumour was punctured with a grooved needle on March 13th and about two ounces of clear fluid escaped. An incision was made into the tumour on March 24th and clear fluid again escaped. The incision never closed and there was a constant oozing of serous fluid from it. The patient left the hospital at her own wish on April 13th and was readmitted on May 15th, saying that she had suffered much pain in her breast, which was always wet, and that something had grown out of the wound. Examination showed that the left breast was much larger than before, the skin over it was tense and red, whilst the whole gland was harder than natural. A large fungating mass was growing from the site of the incision and there was a constant oozing discharge of clear serous fluid. The patient otherwise was in excellent health. The breast was removed on May 19th and the patient left the hospital with the wound soundly healed on June 8th. Subsequent examination showed that the breast contained a cyst as large as an orange embedded in a mass of sarcomatous tissue.

These cystic sarcomata of the breast must not be confused with sarcomata in which cysts are produced as a result of degenerative changes. The following is a good example of a case of degenerating sarcoma:—

CASE 8.—A married woman, aged 51 years, was admitted under my care on June 2nd, 1907, complaining of a painful lump in her left breast.

The swelling had been noticed for eight weeks, and during this time it had increased from the size of a Barcelona nut to that of an egg. Examination showed a tumour as large as a hen's egg in the upper quadrant of the left breast. The nipple was not retracted and there were no enlarged glands in the axilla or above the clavicle. The patient was extremely unwilling to have the breast removed, and I was only allowed to operate upon condition that the tumour was removed locally, whatever its nature. I cut into the breast, therefore, and removed the mass, which seemed to be well encapsuled, and with it I removed a wide margin of healthy tissue. Subsequent examination of the tumour showed it to be a spindle-celled sarcoma with no evidence of any cystic formation.

The patient returned to the hospital in June, 1908, saying that she had noticed a lump in the breast beneath the scar in the previous April, ten months after the operation. Examination showed the recurrent mass to be a hard and fairly well-defined swelling, measuring 4 inches by 2 inches. It was moveable, and the skin over it was not adherent. There were one or two enlarged glands in the axilla. The whole breast was removed with the contents of the axilla and the superficial fibres of the pectoralis major. The growth in the breast proved to be so well encapsuled that it could be dissected out of the breast tissue with comparative ease. It was lobulated, and in many cases it was excavated into ragged cavities which contained degenerating new growth. Microscopic examination showed the growth to be a spindle-celled sarcoma.

Duct carcinoma is not very uncommon. It is always cystic, the cysts being either simple or multilocular. The following case is an example of the multilocular cystic form:—

CASE 9.—A woman, aged 68 years, was admitted into St. Bartholomew's Hospital under my care complaining of a lump in her left breast. She had first noticed the swelling 18 months previously, when it was as large as a pigeon's egg. It grew slowly but painlessly. There had never been any discharge from the nipple. Examination showed a large, irregular, and fairly well-defined swelling in the left breast to the outer side of the nipple. It was not tender and it was not fixed to the deeper structures. It moved freely with, but not in, the breast. The patient had been married 48 years and was the mother of seven children. She had bruised her left breast very severely 30 years previously by falling against a door. The breast was removed on Feb. 22nd, 1910, and the patient left the hospital on March 10th.

The specimen was sent to the museum where it is preserved (No. 3146*a*), with the following description: "Part of a female breast containing a multilocular cystic duct carcinoma. Embedded in the adipose tissue of the breast is a globular tumour measuring about two inches in diameter. It lies close beneath the skin, which is nowhere adherent to it. The tumour is encapsuled for the most part, but here and there it cannot be defined from the surrounding fat. The tumour is partly solid and partly cystic. The cut surface shows the interior of the largest cyst which, like the smaller ones seen upon the reverse side of the preparation, contained a bloody fluid. The solid parts of the tumour consist of a number of rounded ingrowths from the periphery. Microscopical examination shows the growth to be a duct cancer."

(B) INFLAMMATORY CYSTS.

Cystic disease of the breast connected more or less directly with inflammatory changes is of greater diagnostic interest and may present greater difficulties in treatment than the non-inflammatory forms which have just been discussed. Foremost amongst these cysts, and in many ways the simplest, is galactocele. A galactocele is generally the result of inflammatory changes occurring in the breasts of married women. The following case shows that it may be produced as a result of injury to a virgin breast:—

CASE 10.—An unmarried governess, aged 31 years, was sent to see me because she had been complaining of pain and swelling in her breast. She said that five months previously she had been struck upon the breast, a bruise had resulted from the blow, and the breast had become tender. Examination showed that she had a small and freely moveable swelling in the lower and outer quadrant of the right breast. The tumour was in the breast substance and moved when the breast moved, but it was not independent of the mammary tissue and did not give the sensation of floating which is so often felt in the cystic adenomata. The swelling was slightly tender. There was no discharge from the nipple and there was a single enlarged gland in the axilla. The history of the case and the bruising which had followed the injury led me to make a diagnosis of a circumscribed hæmatoma in the glandular tissue. I incised the swelling under a general anæsthetic and found a cyst containing a milky fluid. The swelling therefore was a galactocele. The interior of the cyst was swabbed out with a solution of zinc chloride, 40 grains to the ounce. A drainage-tube was left in for 24 hours and the small incision was sutured. The wound healed by first intention.

Chronic mastitis leads to the formation of a most interesting group of cystic tumours. The cyst in these cases may be single and simple or the whole gland may present the appearance of a sponge when it is examined after removal. The following case is a good example of a single and simple cyst:—

CASE 11.—A married woman, aged 43 years, was admitted into St. Bartholomew's Hospital under my care complaining that she had a lump in her right breast. Twelve months previously she had noticed that her right breast was harder than the left, but she took no particular notice of the fact until Oct. 2nd, 1908, when the breast became more swollen after two days' hard work. She had never suffered any pain. Eighteen months ago she had fallen heavily against a bedpost and had struck her breast. Examination showed a tense lump limited to the upper half of the breast; it was freely moveable upon the pectoralis major and was definitely circumscribed. Careful manipulation yielded a sense of fluctuation. It was not tender, the skin over it was not adherent, and there was no retraction of the nipple. Two or three enlarged glands could be felt in the axilla, and the patient said that she had lost weight. There were some grounds, therefore, for thinking that she might be suffering from a scirrhus. I made a vertical incision into the swelling on Nov. 2nd and clear serous fluid squirted out. The incision was enlarged and a simple cyst was removed. The cyst wall was thickened, fibrous, and firmly adherent to the glandular tissue surrounding it. The cyst measured 1½ inches in diameter when it was distended. The patient left the hospital on Nov. 11th.

CASE 12.—A married woman, aged 48 years, was admitted into St. Bartholomew's Hospital under my care with a lump in her left breast. She said that she had first noticed it nine weeks previously when her attention was directed to it by pain. It had increased steadily in size. She was the mother of nine children; at various times and repeatedly she had been struck on the chest and her nipple had often been chapped. Examination showed the existence of a very hard and craggy lump in the lower and outer quadrant of the left breast. It was about as large as a hen's egg and was freely moveable. There were a few enlarged glands in the left axilla. The right breast and its axillary lymphatic glands were natural. The history of the injury and the fact that she had felt pain in the breast led me to incise the swelling, which proved to be a cyst filled with clear yellowish fluid under considerable pressure. Frozen sections of the indurated tissue round the cyst were made at the time of the operation. They showed that the thickening was due to chronic inflammation. The wound healed by first intention and the patient was discharged on August 14th, ten days after the operation.

CASE 13.—A very nervous married lady, aged 49 years, was sent to see me on account of a painless tumour which she had noticed for the previous three weeks in her right breast. The swelling only occupied a part of the breast. It felt densely hard and there was a slight irregularity at the lower and outer part of its circumference. There was a single enlarged gland high up in the axilla. The patient said that many years ago she had suffered from an inflammation of the breast when she was suckling. I had no doubt in my own mind that she was suffering from a scirrhous carcinoma, and I advised her to go to a nursing home as soon as possible with a view to removal of the breast, if after incision the tumour was found to be solid. At the same time I told her doctor that it would be advisable to cut into the swelling before the breast was removed because she had previously suffered from mastitis and because the axillary gland seemed to be rather softer than is usually the case in cancer. She was persuaded by her friends to see another surgeon before following my advice. He put a trocar and cannula into the tumour and drew off two or three ounces of clear fluid. The swelling no doubt was a simple cyst originating in the ducts or acini of the breast tissue. The cyst had become enlarged as a result of long-standing inflammatory changes brought into prominence by the retrograde processes taking place in the breast at the menopause. I ought, of course, to have recognised the cyst by its elasticity as well as by the slight irregularity of the circumference which pointed to a patch of localised mastitis such as is not common in cases of cancer. But I should have discovered the cyst at the time of the operation without removing the breast and perhaps in a safer way than was actually done, although it seemed much more satisfactory to the patient to have it tapped there and then and thus to be relieved of the swelling at once. The moral of the case is not to give too decided a prognosis in cases of doubtful mammary tumour, for a cyst may simulate very closely a solid tumour.

There is another group of cases in which a chronic inflammation of the breast is associated with a formation of cysts which may be single but are much more frequently multiple. The following case is a good example of the type and is unusually complete as I had the opportunity of watching it for a long time:—

CASE 14.—A female patient, aged 34 years, and unmarried, came to me on March 11th, 1905, complaining of a painful swelling in the right breast. She said that she had first noticed "something wrong" with her right breast in December, 1904, and that in April, 1905, the breast contained a definite swelling of about the size of a peanut. The swelling remained stationary in size until November, 1905, when it began to grow. A month later it was painful for the first time. There was no loss of weight. She was a healthy woman when I saw her in March, 1906, and her breast looked natural. Examination showed that there was a hard mass in the upper and inner quadrant which measured an inch and a half in length by an inch in breadth. The mass was slightly tender and there was no enlargement of the axillary glands. The swelling was definitely limited in outline and was freely moveable in the breast tissue as well as upon the underlying structures. It did not fluctuate. The swelling was explored on March 12th and was found to be a small cyst surrounded by chronically inflamed tissue. The cyst was removed and the wound was stitched up, a drainage-tube being left in position for 24 hours. The wound healed by first intention. The pathological report which reached me subsequently says:—"Description: Thick-walled cyst of the breast. Histological examination. Chronic mastitis."

The patient came under my care again late in the year 1906. The note states that she is a well-built and well-nourished woman with a scar one inch above and within the right nipple. There are two tense and circumscribed swellings in the upper part and outer quadrant of the right breast. The swellings measure about half an inch in diameter. They are freely moveable under the skin and in the breast tissue. There are four or five similar but smaller swellings in the lower and inner quadrant, and three swellings of a similar nature in the upper and inner quadrant, so that the right breast contains at least nine separate cystic swellings, whilst in the left breast there is one similar cyst measuring about a quarter of an inch in diameter and situated in the upper and inner quadrant. The patient said that her right breast was always painful, and the anxiety which it caused her prevented her from following her occupation of teaching. At her earnest desire, therefore, I excised her right breast on Dec. 27th, 1906. An incision was carried round the lower half of the circumference of the right mamma. The skin and

subcutaneous tissues were dissected off the whole of the mammary gland, which was then removed, leaving the nipple and the skin untouched. The cyst in the left breast was afterwards removed. The wounds healed by first intention. The pathological report upon the right breast states, "Chronic interstitial mastitis with cysts and much overgrowth of the acini. There is no intracystic growth."

The patient wrote to me in December, 1907, nearly a year after this operation: "Since July I have been much better than before, and I certainly feel that there is no further development either in the breast itself or under the arm. I have had much less pain, at least it is not so continuous as it was before, and I believe that the lumps are decidedly smaller." A few months later, in April, 1908, she wrote: "I have been troubled again about my breast as I have had a good deal of pain. The lumps under the arm are no worse, nor, so far as I can tell, is there any noticeable change in the breast itself, except in the matter of pain. About five weeks ago it was very bad, but for the last ten days it has been better." When I saw her a few days after this letter I found that she had lately had influenza and was depressed by the attack, so that she had felt the pain more acutely than usual. Examination showed that her left breast was free from nodules and was soft, but that there were two enlarged glands in the axilla. I reassured her, ordered her a belladonna plaster, and gave her a prescription for a mixture containing iron and nux vomica.

She wrote again on Jan. 30th, 1910: "I cannot answer your questions quite so satisfactorily as I could wish, and yet I feel that I am no worse than when I last saw you—in fact, I think that I am better. To all outward appearance the breast is quite normal. I am never entirely free from pain for many days together, but it is as much in the shoulder and under the shoulder-blade as anywhere. I have occasionally what I may describe as a neuralgic pain in my arm and then I resort to aspirin. The glands under the arm give no pain or discomfort now, and unless I actually seek for them I forget their existence. They are still present, but I fancy that they are smaller. The little soft lump which has always been near the nipple is also there. I think it varies in size from time to time, but if it grows at all its growth is very slow and it seems a little harder."

This is an interesting case because it belongs to a difficult group of breast tumours, and I have been able to follow the course of the mastitis for six years, from a time when the breast was healthy until the inflammation has become chronic. The inflammation began slowly, without pain, and from no known cause. One breast became affected and a single cyst was formed. This was followed by a period of acute inflammation with the formation of many cysts attended with so much pain that the breast was removed by a plastic operation. Both breasts were affected at this time and the axillary glands became enlarged. This period of activity was followed by the present state of quiescence. I do not know whether this is a common history in cases of chronic cystic mastitis, nor do I know the relationship which this form of inflammation bears to carcinoma at some later period.

(C) CONGENITAL CYSTS.

Lymphangioma.—The last group of cystic tumours of the breast to which I wish to call attention are the congenital cysts, for of the hydatids I have no experience. The congenital cysts occur in very young children, and they are usually of the nature of lymphangioma. The following case is an excellent instance:—

CASE 15.—A boy, aged 3 years, was admitted into the Victoria Hospital for Children under my care with a swelling of the left breast. His mother said that his breast had been increasing in size for the last 18 months until it had grown to the size of half a Tangerine orange, but it had never been painful. I removed the breast, which is preserved in the Museum of St. Bartholomew's Hospital (No. 3142*d*), where the catalogue states that, "It shows a cystic growth in the tissues beneath the breast, probably originating in dilated lymph spaces. Besides the large multilocular cyst which is visible, a number of small cysts are scattered through the fat. The nipple and the breast itself are normal." The tumour, therefore, is a cystic lymphangioma of the same type as that which is not uncommonly seen in the necks of children, though it is rare on the trunk.

These cases are examples of some of the forms in which cystic disease of the breast presents itself to our notice. The fact that all but one have come under my own observation shows that they are by no means rare, whilst the mistake that I made in the recognition of one of them shows, perhaps, that they are not always easy to diagnose. The lessons to be learnt seem to be, in the first place, that our minds must not be filled with the idea of scirrhus to the exclusion of every other form of tumour when we examine a breast which contains a tense swelling in a woman of middle age, even though there be some enlargement of the axillary glands. A careful examination should be made in such cases to ascertain whether the swelling is more tense, more elastic, and more circumscribed than is usual in carcinoma. A patient with a tumour of the breast is generally examined whilst she is sitting in a chair, because she walks into the consulting room. It is better, I think, to examine her when she is lying upon the couch in every case where there is any doubt. The recumbent position allows the breast to lie upon the chest wall instead of hanging away from it, whilst the pectoral muscles are relaxed, and the exact conditions existing within the mammary gland can thus be determined more accurately. There is no great difficulty in making a correct diagnosis when fluid can be squeezed out of the nipple, nor when there is a weeping discharge from it; nor can a cyst be easily overlooked when it is thin-walled and superficial, nor when there is evidence of chronic mastitis in one or both breasts. The really difficult cases are those where the cyst is single, not very large, thick-walled, and surrounded by glandular tissue in a state of chronic inflammation. Instrumental exploration alone will reveal the cyst with certainty in these cases, and I prefer incision to aspiration or puncture with a needle, because the cyst wall may lie so deeply or may be so tough that it is not readily punctured; or the contents of the cyst may be too thick to pass along the needle or cannula; or worse still, there may be an intracystic growth or a nodule of commencing cancer in its immediate neighbourhood. Due attention, also, must be paid to the history given by the patient. We are a little too apt to think that cancer occurs more often than is really the case in breasts which have been damaged by long antecedent inflammation. In a certain proportion of cases it is so, but such an inflammation may also be followed by chronic mastitis and the formation of a thick-walled cyst about the time the breast undergoes the physiological changes of the menopause. In some cases, too, it happens that a cystic tumour may disappear, or at any rate become smaller for a time, and if there is such a history it may be accepted as confirmatory evidence, although patients with undoubted carcinoma sometimes bring themselves to believe that the tumour varies in size.

The outcome of what I have said is to show that cystic disease of the breast is not a distinct entity. It is associated with almost every variety of disease of the mammary gland, and requires careful investigation which is best carried out by a combination of clinical and pathological research.

HEART STRAIN AND DILATATION.[1]

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IN opening this discussion to-night will you allow me first to say, in explanation of what follows, that I am not here at my own instance, but by the kindly pressure exercised by the President upon an old and unwilling friend.

The subject is a very intricate one if fully considered; I hardly appreciated how much so till, after I had put my notes together, I began to criticise myself from out of the mouth of some most illuminating literature from certain of the giants of our day. I will confess that I went as far as anathematising your President's powers of persuasion, and I tremble still as I venture to put thus thinly before you an entirely clinical aspect of the case as it has come before me. But I do not think it will be waste of time to put the matter thus, for the subject is a very discussable one, and the paper will serve as the peg upon which to hang the remarks of subsequent speakers, which will be much more valuable than anything I have to say.

I shall consider both strain and dilatation more or less together. I feel compelled to do so, because strain, although it may be very real, is to my mind an intangible sort of thing and needs to be stiffened by some definite change of structure, although the two may not necessarily occur together. Now strained hearts, so called, are constantly in evidence; I surely do not exaggerate in speaking thus. With what body do they thus come before the physician? They have usually been where some muscular exertion has been undertaken, by male or female mostly young, and often apparently of a very insignificant character. The symptoms appear to be unnatural sensations of illness: perhaps nausea; perhaps fainting; the breath sighing; irregular action of the heart; collapse; sensation of impending death, perhaps, in some few cases. Then there come pains of various degrees and kinds over the region of the heart, and other sensations of general decrepitude such as extreme lassitude on the smallest exertion. The heart is then examined, and the impulse is found a little outside the normal;

[1] A paper read before the Medical Society of London on Nov. 28th, 1910.

the beat wants in decision and varies in force; not infrefrequently, I should say, it intermits. There may be no murmurs of any kind, or if there be, there is a systolic bruit at the base, usually over the pulmonary valves, and, or, a systolic murmur towards the apex which alters considerably in area and intensity as the subject changes from the erect to the recumbent posture, when it is likely to spread all over the region of a line drawn from the impulse to the pulmonary valves. Rest of a prolonged and more or less rigid kind is generally ordered. Here is my text:—

A boy, aged 18 years, at one of our public schools two and a half years before I saw him had taken part in a steeplechase and sports, and came home with "a big heart, a systolic murmur, and a questionable friction sound." He was kept in bed and got well. He was kept quiet afterwards, but he still had pain in his heart region if he ran much, and also under such circumstances would feel faint. His nerves were upset; he would have been in the eleven, but he got too nervous. He was a fine healthy fellow with phosphatic urine and a trace of albumin, but otherwise without discoverable fault. Eighteen months later he came to know if he might row at college. His medical adviser there had said he might, but Dr. C. D. Bowdich Hale, his doctor at home, who knew him better, had said some time before that he might not. He was still a most splendid fellow in physique, and I really could not say he must not, but I said take it easy. Well, he did row, and went to pieces, and a localised systolic murmur again developed. A consultation was held, and he was ordered to do nothing for a long time, my note says for three years, and I understood that this was because of the condition of his heart. Some four years later I saw this young man again. He had been overworked at a mission and had suffered from dyspnœa, and pain in the cardiac region, and faintness. Llangammarch being near his home he was given there a modified Nauheim course. When I examined him afterwards his heart appeared to me to be still perfectly sound. There is one other point in the case that seems of importance—viz., that some few years before I had seen this patient's father suddenly taken with ptomaine poisoning, and what was supposed to be a most alarming cardiac failure. He had been tremendously overworked, and was seized suddenly with a bad faint, but by the time I arrived there could be no doubt that the then condition was essentially nerve and not heart.

Another case is that of a healthy man, aged 35 years, certainly coming of gouty, and probably of nervous, stock, who some years ago suffered from nervous dyspepsia. He was a man of intellectual pursuits, working anxiously, and giving little heed to his physical development. He took a holiday and commenced it with a bicycle ride of excessive length, and not long after, impelled, I suppose, by the invigorating air of the Swiss mountains, he overwalked himself. After a few days, without apparently feeling much amiss, he suddenly fainted, and after a few days he had another faint, and he subsequently came under notice, with some pain about one shoulder, a systolic murmur at the base of the heart, and a feeling of the necessity of deep inspiration which came on especially at night, and which made him feel, he said, that if he did go to sleep he would never wake up again. But what was the more noticeable to his friends was an excessive decrepitude in walking, and the impression that he gave of being so very weak and really ill, and this two to three months after the original strain. There was no increase of dulness, a little only of varying force in the several beats of the heart, an occasional systolic murmur—nothing pointing to disease with any certainty.

Of dilatation of the heart it may perhaps be said that there are two sorts of cases met with, or indeed three, like the three Johns of the "Autocrat of the Breakfast Table." But of one of them (the real John) I do not propose to speak otherwise than incidentally. Of the first class there are two briefly stated. Both are women; both are very stout; both are nervous. The one of about middle age lost her husband a year ago, and has "felt mouldy" ever since, and, not unnaturally, wants to be better. She has been told that she has a dilated heart, but that there is no organic disease. The strain of the natural processes of life appears to have proved too much for it. Her symptoms of this are entirely general. She is not well, "so tired." She is so stout, that it is impossible to obtain any reliable information as regards her heart by percussion, but the sounds are perfectly natural; they are not unduly conducted into the axilla; the action is quite regular, and the pulse tension is under, rather than over standard, 110–120 R.R.

The second case is a woman, aged 39 years, who has had much out-of-health-ness in her life. Her nerves went to pieces after influenza, and again after a course of thyroid extract for the relief of her extreme obesity. Some years ago she went to Nauheim for baths, but they were too much for her, and she only had a few. She came for degeneration of her heart and vessels and to know if it were worth her while to undergo another Nauheim course. That she is an unsafe life is clear, and an unhappy one also, for she is always in misery, but so far as her heart was concerned to my ear it was perfectly sound. There was no murmur; no palpable impulse; the heart's action was quite regular; and the pulse tension only 120–130.

Of the other class I must add a little more, for although much the same forerunning conditions may be at work, added thereto are illnesses of many trivial sorts, more especially ephemeral fevers in young people, but all sorts of temporary disturbances, leading to feelings of general malaise, which in sensitive people lead them to consult a medical man. When so doing the heart's rhythm is found to be disturbed in some way or another, the impulse of the heart is found to be outside its ideal limit; quite possibly a murmur is heard, such as has been already shortly described, and according to some there is an increase of the præcordial dulness. For all these cases rest, and generally prolonged rest, is ordered, combined with one form or other of treatment directed to remedying the dilatation, and in my experience by far the most important sign of improvement or recovery is judged to be the movement inwards of the visible or palpable impulse of the heart, which is anxiously looked for day by day as it provokingly varies, now in, now out.

It is, I think, almost entirely upon this position of the impulse and upon the præcordial dulness that the diagnosis of heart strain and dilatation is so commonly made, but they are surely quite insufficient of themselves. Increase of dulness, fairly reliable as it is for enlargements of the right side of the heart, is of very little value when dealing with the apical section of the organ, and I hold that, except perhaps by radiography, it is impossible to obtain much reliable evidence of the lower and outer limits of the heart when it comes to attempting to estimate variations of relatively small size taking place within short intervals of time. I do not believe radiography can do it, when you come to consider the moving heart and the rapidly changing conditions of the environment—the lungs, the thoracic walls, and the diaphragm.

As regards the impulse in relation to the chest wall. No doubt in general terms it is a fairly constant anatomical landmark, all things considered. But what of the several conditions that tend to alter it when we come to try to precisely fix its limit and to judge of its value as an indication of dilatation? Suspended as is the heart between the lungs, and resting upon the diaphragm, it must vary in position constantly, with the varying *substance*, *distension*, and *position* of these surroundings. Again, we are dealing with a *muscle* and therefore the position of the impulse upon the surface will vary with the tone and precision of the muscular contraction. The ventricular muscle in systole twists up into a tight spiral. But does this constitute the complete history of any living muscle? Examine your own heart after dinner, and in bed at night when lying on your left side, and I shall be surprised if it does not tell to many quite a different tale. I cannot imagine any living fibre acting hour in and hour out, through days and weeks and years, with any rigid mechanical machine-like precision such as this. Could it last if it did? A very considerable latitude must be allowed to contraction, and contraction in the healthy physiological play of any muscle. The general result is accomplished truly, but not always with a vigour of equal value; and unless this vitality —this individuality of muscle fibre—so to speak, be allowed for, I cannot imagine how all the varieties of sound and murmur that we hear are to be explained. How is one to explain, for instance, some of those very common murmurs at the apex that are produced in a moment on suddenly shifting the position of the body? Muscular distension or

relaxation has a mean but healthy excursion on either side, must by no means be neglected, and in a series of cavities linked together thus the shape of the organ will vary somewhat in accord, and beat by beat. This is another reason why percussion can be no adequate or reliable gauge of what I will venture to call the *physiological play* of the healthy heart. Of the existence of such play there can surely be no doubt. To what extent this variation reaches I do not think that at present we have any accurate knowledge. It is easy to see that information is very hard to obtain; but my own observations lead me to say that the considerable alterations in size that have been supposed to be indicated by percussion and to become reduced at once by bath or exercise can have no real existence and no bearing upon any dilatation that I understand. Then the shape of the chest is over and over again ignored when judging of the value of the position of the impulse, and a heart is said to be enlarged and dilated because from this cause also its beat is more diffused and external than it should be. But what else is to be expected in the narrow, miserably-shaped chests that one is meeting with so often? The heart is almost certain, in such circumstances, to occupy more of the front of the thoracic cavity than it otherwise would.

When one comes to speak of murmurs as evidence of dilatation, I am then perhaps upon a more debatable ground, for there are many cases in which anyone must own to considerable doubt as to their cause. Starting from the fact, long well recognised, that there are many cardiac murmurs that are not valvular and are of little importance, I myself would go further, and say that many murmurs that seem to be regarded as evidence of valvular or, perhaps still worse, of muscular disease are, from the absence of symptoms of ill health, of some other source of production not to be explained with certainty, except that they are *functional*, if we may use that term to exclude organic changes in the valves or muscle. I say this in face of the admitted fact that many of such murmurs, though variable, are of great persistency. It is usually supposed that functional murmurs indicate some deterioration of blood or tissue, the which, as soon as it is removed or repaired by tonic or rest, will disappear. This has not been my usual experience, however. I should say some follow the rule, but many will continue for long, sometimes for many years. Yet there will be no indications of heart failure. These things are common in boys at school and in young men who will take as much exertion as others and who have no distress or knowledge of any incompetence in their daily undertakings. I have known a large number of such conditions first discovered in an examination for life insurance, and which have led to refusal or postponement in consequence. Many are in nervous subjects, who suffer from "the heart in the mouth" of the embryo orator or cricketer or performer in public of any kind, and I have little doubt that a large number of these murmurs are the result of the physiological play that I have alluded to. Long years ago we were shown and taught—oh! physiologist, think leniently of me when in my mellow years I call up the shade of Wilkinson King—that on the right side of the heart there is a safety valve apparatus that allows of regurgitation, and by so allowing it fulfils a necessary function. Surely, also, under appropriate conditions regurgitation is to be expected, and looked for upon the left side of the heart, for it seems to me unreasonable to suppose, as I have already said, a nervous muscular organ with a throbbing vitality such as the heart possesses to be always in tone. And to this purely physiological up and down—I will not call it either failure or imperfection—may be attributed many of the muscular rumble murmurs, many of the systolic souffles, many of the purely postural murmurs. Many of these last must, I think, be true mitral leaks, although not due to disease. One is entitled quite consistently thus to speak of *valvular* leakage without disease.

I willingly admit, however, that as regards their origin in many cases of this sort it is quite permissible to remain in doubt, all I maintain being that it is very necessary to keep the various alternatives in mind and that one must not conclude in favour of dilatation without very careful consideration. I have often wished in regard to these conditions that it may be so much a matter of nervous impulse—and it would not be difficult to arrange, I should think—that some ingenious mind would devise a simple stethoscopic apparatus, electric or other, by which to examine the heart at a distance while the patient sleeps. Methinks that many a sound or action that now causes doubt might be more certainly relegated to the region of the unimportant.

One more argument may still be adduced against the too prodigal use of the term dilatation, which is often neglected: it is that the symptoms for which men and women apply for treatment are not such as are found in cases where dilatation is beyond dispute. Fainting is perhaps one of the commonest of all symptoms in these cases of spurious dilatation. It is a prevalent belief amongst men and women that fainting means jeopardy because of "weakness" of the heart. There is no doubt that the same idea is pretty deeply cut into the medical mind also. Why not? It seems so reasonable. Yet there is no idea more absolutely contradicted by experience. Do people with well-marked disease of the heart associated with dilatation faint? Surely they of all cases ought to, if fainting be a sign of heart disease. What does your experience teach you? I will hazard a guess that it tells you this: that fainting, as a symptom of pronounced heart disease, is so rare that probably few here to-night have ever seen it happen. And there is good reason why. The vascular mechanism prevents it, and a dropped beat in the pump is taken no instant account of in the capillaries, or in the nutrition of the brain upon which function depends. Faints are peripheral phenomena, and due to peripheral spasm, or relaxation, to nerve storm, and so on, and with them the pump has little to do. Thus, by the way, it is that an intermission of the heart beat, if unassociated with any obvious disease, is one of the most unimportant of cardiac aberrations, and a weak pulse, made so much of too often, has but seldom any sinister meaning *quâ* heart.

Another very common complaint of these people is that they are dreadfully tired; the least fatigue is too much for them. Is this a symptom of pronounced disease of the heart? By no means. Systemic fatigue, as Clifford Allbutt happily calls it, is no indication of heart failure.

And what of all the other signs—the pain in that region, for instance, is that a definite sign of a damaged muscle? What sufficient evidence is there that the heart shows more than a dull muscular sense? Is there not plenty to indicate that that surface area is a neuralgic one like the sciatic region—the shoulder, the face? What of the sighing respiration, the collapse, the experience of dreadful illness, and so on? Is it unwarrantable to say, as an encouragement to one who thus suffers—I don't dispute the suffering, only the cardiac origin and the danger to life—"If you are able to appreciate your sensations so acutely you may be pretty sure your nervous centres and your heart are still much too vigorous to be anywhere near the point of death." Heart disease (within the confines of which I emphatically include dilatation of its muscular wall) produces the very opposite of this; it leads to congestive stagnations, and therefore to somnolence and mental hebetude; to that Crossing of the Bar, of which but the one in a thousand, perhaps not that, thank God, is able to recognise the signals when actually passing over it.

Now what do I suppose to be the condition of strained or dilated hearts at their onset, under such exertion as may have happened? As I try to picture them I see first of all a presumably healthy heart, strung for a life of, say, 60 years of wear and tear. Is dilatation so easy a thing to bring about under such conditions of temporary stress as have been laid upon it? Can it be admitted that it is so frequently the cause as to explain the many cases that one sees? Take the young man after a well-contested race, and what is the actual condition of his heart? He looks bad enough, certainly, and temporarily there is, no doubt, often a considerable over-distension of the right side of his heart—a condition I should suppose for which Dr. Gee years ago suggested the term asystolism. But I take it there is little evidence of mischief on the left side, and the man is simply played out from excitement and physical expenditure; his nerve current has for the moment ceased to run; and the heart is therefore, as all the other viscera, running on its own, the engine being for the moment shut off. If it were possible to force it, then and there, to fight its battle o'er again, death or irreparable damage would be sure to follow. But is the muscle there and then *ever stretched*, that is dilated? This is, of course, possible for a few cases, but for the many that *powerlessness in living*, that cardiac atony that

looks so ill, is the sign of the heart's health, and in a few minutes, a few hours, a few days, it will be working as well as ever. In some few there will remain those signs and symptoms of doubtful meaning of which I have already spoken.

The question in my mind is whether even true heart-strains, by whatsoever evidence it is possible to locate them, are not due to defective innervation—abortive messages—rather than to failure of response on account of damaged (over-stretched) muscle. But in saying this one would not wish to dispute, for one cannot doubt, that a place must be reserved in cardiac pathology for the sometimes result of actual and progressive morbid changes starting from early conditions such as these, and Dr. R. W. Michell's observations at Cambridge on the initial and later stages of what appears to have been genuine cases of the strained heart are very suggestive. But it interested me much to read that as regards *dilatation* that persists he had never found it, except in such who had in addition to strenuous exercise suffered from diphtheria or rheumatic fever. I take it that in general medicine we have a good illustration of what chronic strain *will* do in some of the many cases that one meets with of the dilated heart of chronic renal disease. But spread over so long a time, this is probably an adequate cause; certain strenuous muscular occupations will, no doubt, do the like, but I doubt if such chronic processes give any justification to the term "dilatation without disease," which I confess to cordially disliking, because it is just here that over-anxiety is likely to step in and do harm, and where the true measure of the physiological capacity of the heart for labour needs to be correctly appraised. Errors must, of course, be made on either side. I do not doubt that any of us may underestimate the risks of exertion in a weakling's heart. Still, on the whole, one cannot but come to the conclusion that the heart muscle has a magnificent power of resisting strain, and that dilatation is seldom, indeed, other than a *result*, and *late stage* of real *disease*. Primary dilatation is surely very infrequent, except perhaps as senility advances and degeneration has taken place.

Whether after all this is said we can entirely do without some term such as acute or temporary dilatation for some few cases of sudden overstretching of the muscle wall I hardly feel inclined to decide. There are, of course, cases where, as the result of heavy work, *something* suddenly happens and the heart dilates, and perhaps this may be more often than I may seem to allow. To guard against that possibility I certainly hold it to be necessary that would-be athletes should be carefully selected, and boys graded and inured by gradual training, as is done now in most of our large schools; but in true dilatation I think one may fairly expect some special indications to suggest caution in the particular case. A sudden rupture of a valve is to the point. In such cases the symptoms are usually immediate and severe, and it does not take long to find out that something untoward has come to pass. In the cases of which I have been speaking, this is seldom or never the case, and therefore I have come to think that dilatation, as a condition easily caused, is more often in our thoughts than the frequency of its occurrence would seem to justify, and that by over-nursing it we prolong the state that we set out to cure.

But I have yet to give a still wider application to these remarks by including within their scope a large group that belongs to the decadent period of life. I may, perhaps, designate it as "the irregular heart of the over-fifties." The heart in such a case seems to tumble about in a most erratic fashion—if so I may speak when Dr. James Mackenzie has in this region rendered such distinguished service by his attempts after reduction of chaos to order; yet there may be no murmur and no signs of cardiac failure. These people will do a good day's work, yet they sometimes faint; they are sometimes giddy; the heart at times will quite suddenly change its rhythm and become quite regular, and then again relapse. One may see a like phenomenon in certain cases of tachycardia, the rapid action ceasing suddenly and being replaced by a slow movement. Often have I wondered, as you must have done, how the circulation could be carried on in such circumstances. There can be no doubt about the absence of all signs of cardiac failure. Indeed, when these occur my case fails, and dilatation has probably occurred. It is, I should think, not unfair to argue that the muscle cannot be of so very inferior a quality if it is able thus to perform its duties when acting at such a disadvantage in this higgledy-piggledy fashion. And thus questioning, I fancy that there may be a still deeper root to the matter than an essential muscle fault; that some of these cases are early signs of a *nervous centre growing old*; and that the faintness, giddiness, and irregularity of the heart may be, not cause and effect one way or the other, but special sense centres and heart both giddy together as the result of some deep-seated central nerve storm or degeneration. Many a time have I seen this condition come on in men and women who have lived a hard life of mental stress; several times, too, have I known it associated with the vertigo and loss of consciousness that has sometimes been called senile epilepsy; I have seen it come and go with an attack of gout; and I incline to link it with some cases of Stokes-Adams disease, which in like manner I have seen come and go in obedience to a similar toxic state and to the dictates of an epileptic storm. Some of these cases are no doubt cases of degenerate muscle, but I have doubts about many of them, and it has seemed to me that they do better if allowed to take moderate exercise and to live in conformity with the time of life to which they have attained than if, as cases of fatty muscle, they were condemned to bath-chair and bed.

To sum up, then. True heart strain—by which I understand a state of muscle that, if not dealt with by retreat from all active exercise for long periods, leads to dilatation of the heart—is a rare condition. Personally I cannot remember to have ever seen it, but then I should not do so. Dr. Collier, Dr. Michell, and those who have to supervise athletic exercise in its home are the men to determine both its frequency and its signs and whose opinion one would be glad to hear to-night. Dilatation of the heart, in its beginning, is evidently not easy to determine with certainty, for it may share signs and symptoms in common with many emotional and other nerve disturbances of which the heart is a past-master of expression. Cases of doubt one must admit to be common, and they call for circumspection as regards their management, but one must beware of timidity, and I cannot but think that this has of late years been much abroad to account for the frequency and the looseness with which the term dilatation of the heart seems to have been applied.

Portland-place, W.

FURTHER REMARKS REGARDING THE MOTOR FUNCTIONS OF THE STOMACH.

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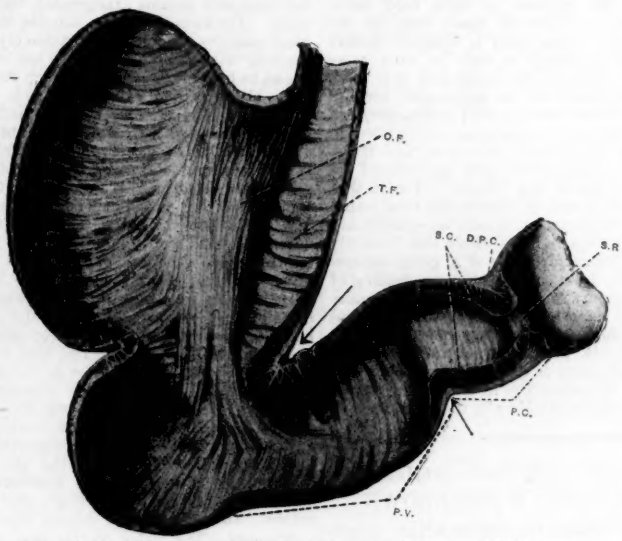
IN 1908 I published papers[1] in which I urged the importance of the "middle sphincter" of the stomach. Since then there have been many statements made, due chiefly to the interpretations of radiographers, which require criticism, because there is a danger of these statements being accepted as facts, whereas they seem, in absence of proper confirmation, to be more fanciful than truthful. These observers are seemingly unwilling to accept the presence of a "middle sphincter" of the stomach merely because it cannot be always demonstrated post mortem. Many observations, however, show that such a physiological "middle sphincter" does exist, and that in normal stomachs the parts of the organ on each side of this "sphincter" must be regarded as acting separately. The "middle sphincter" can be likened in some manner to the pylorus in that it holds back the stomach contents in the cardiac portion until they are in proper condition for being passed into the pyloric tubular portion, just as the pyloric sphincter acts in retaining the pyloric contents till they are in proper physical and chemical condition to be treated in the duodenum.

Several recent radiographers and others assert that the pylorus during gastric digestion descends naturally below and to the left of the umbilicus. I beg of them to ask their surgical friends to note in how many cases, when the abdomen is opened, the pylorus can be pulled by the hand

[1] THE LANCET, Feb. 22nd (p. 549) and July 25th (p. 224), 1908.

of the surgeon *from* the situation in which we are accustomed to look for it *into* the position which these radiographers make it assume. One must regard the muscular coats of the stomach as being less vigorous than the prehensile muscles of the average surgeon. Here in the North, at all events, there are not more than 20 per cent. of the stomachs thus examined which possess a pylorus capable of being pulled even down to the umbilicus, and one must remember that many of these stomachs are likely to have an *abnormally* mobile pylorus. When one thinks of the matter it is difficult to explain why the more or less longitudinal fibres of the gastric wall, even although assisted by the weight of the food in the stomach, should pull the pylorus into a position below and to the left of the umbilicus. The circular fibres cannot do it. It must be remembered that even *if* the pylorus is not so limited in movement as has hitherto been described, yet no one has challenged the fact that the cardiac orifice is the most fixed part of the stomach. The longitudinal muscular fibres would naturally tend to draw a less fixed part in that direction. The observations of these radiographers, to my mind, confirm my own, and I still prefer my own interpretation. They say that carbohydrate food begins to pass through the pylorus (displaced as described) in 15 to 20 minutes, and proteid in 30 to 45 minutes. These are the times when I observe food beginning to pass through the "middle sphincter." I think that these gentlemen mistake the "middle sphincter" for the pylorus. My interpretation is strengthened by the observation that food is not seen to pass this point any sooner where the stoma of a gastro-enterostomy is properly placed in the pyloric part of the stomach, nor does the cardiac part of the stomach completely empty itself in a shorter time in such a case.



The anterior half of a formalin-hardened stomach after removal of the mucous membrane. The lettered references need not be explained. (Kindly lent by the late Professor D. J. Cunningham to illustrate previous articles.)

The clinical symptoms of an ulcer in the pyloric end of the stomach give further support to the probability of activity of this physiological "middle sphincter." In a large number of such cases there is a fairly well-defined interval of relief after the patient takes food. This is apt to give rise to the diagnosis of duodenal ulcer, but the two may be differentiated by the fact that the interval of relief is shorter in a case of pyloric ulcer and the site of both pain and tenderness, as well as the reflection of the pain, differ from those of duodenal ulcer. This interval of relief cannot be explained satisfactorily by neutralisation, by the food, of irritating acid which may be present. If this were so one ought to have a similar relief in the case of an ulcer of the cardiac end, but here the pain follows immediately the swallowing of food and must be due to mechanical irritation of the food. Radiographers observe that food, when swallowed, passes to the lower part of the stomach. If there were no "middle sphincter," and especially if the pylorus were displaced as they describe and therefore formed the lowest part of the stomach, then one would expect an ulcer in the pyloric end to give rise to immediate pain, but it does not, unless the stomach is dilated and the "sphincter" therefore obliterated.

Before leaving the question of the "middle sphincter" one may repeat that it is possible that the action of the "middle sphincter," plus the general good tone of the pyloric portion distal to it, is responsible for the prevention of regurgitant vomiting of bile, which occurs most frequently in stomachs which were atonic before operation, and which also occurs occasionally during the atonic period of convalescence after a gastro-enterostomy and disappears completely, often without any special treatment, as the patient generally, and the stomach particularly, gains strength and tone. In such cases, however, a habit may soon be formed, and it is well to stimulate "tone" by lavage and tonics which will act on the gastric muscle.

I think there is no doubt that food, when swallowed, goes directly to the lowest part of the stomach, which part, at the beginning of digestion at all events, is immediately proximal to the "middle sphincter." It is not apparently a question of ordinary filling up of a bag. Gravity has, to my mind, little to do with what goes on. I think that too little regard is given to the remnants of the alimentary tube along the lesser curvature of the cardiac portion, which were so clearly shown in some of the drawings of the late Professor D. J. Cunningham (see Figure). This tubular remnant is probably responsible for the carrying of the swallowed bolus to the most dependant part of the normal stomach, whether the person is in the upright or horizontal position. This occurs in spite of the fact that food is already present in the organ. Some radiographers have demonstrated "blobs" of food passing along this part—surely due to segmentation similar to that which takes place in the small intestine. Further, it is possible that the action of this tubular remnant may explain the phenomenon which occasionally occurs after gastro-enterostomy has been performed—namely, vomiting of pure bile mixed with food swallowed but a few minutes before. The bile, having regurgitated through the abnormal and improperly placed stoma, collects in the cardiac end of the stomach in such quantity that the taking of food (carried to the lowest part of the stomach) is sufficient to stimulate vomiting in an organ already irritated by the excess of bile present. The bile being nearest the cardiac orifice is ejected first while the food, being retained, may keep up the patient's nutrition. It has impressed one how such patients can complain of most persistent and voluminous vomiting and still be in such good condition. The explanation I offer is at least a feasible one. The action of this tubular remnant would further explain the immediate and uniform pain which occurs, whatever may be the position of the patient, in ulcer of the lesser curvature in the cardiac portion when food has been swallowed. One would expect, if gravity alone acted on the food, even although aided by the propulsive power of the œsophagus, that when the sufferer lay, for example, on the left side some amelioration of the pain after swallowing would be experienced, but this is not the case.

We shall, I think, as time goes on, hear less and less of closure of the stoma after gastro-enterostomy. In the few cases which I have had the opportunity of examining when the abdomen has been opened, even years after the operation, I have never found any indication of this having occurred. Modern careful technique in making the stoma, which practically ensures "first intention" of the wound at its margin, obviates any such closure. Examination of such cases with X rays after a "bismuth feed" has invariably shown that food continues to pass out through the stoma in certain, but possibly variable, proportion. The persistence of the stoma ensures a safety-valve action when necessary.

It has been very freely stated by surgeons throughout the world that if gastro-enterostomy is done in stomachs in which no pyloric stenosis exists the patients are frequently worse after the operation than before. This is said to be the case, especially, if no other demonstrable gastric lesion is present. The neurotic condition of the patients, instead of the inefficiency of the surgeon, has been blamed for the bad result. I have had such bad results, and I have taught according to the usually accepted ideas, but have never been quite satisfied that the statement is a correct one. In a case where gastro-enterostomy is done for duodenal ulcer where no organic pyloric stenosis exists the ulcer heals, the pyloric spasm disappears, and then results a patient with a gastro-enterostomy stoma present in a stomach which is otherwise normal, yet it is only the rare exception in such cases to have trouble. I believe that such so-called neurotic patients with prominent gastric symptoms are subjects of some lesion distal to the pylorus, whether it be in the gall-bladder, appendix, or other part of the alimentary system, and the gastro-enterostomy will undoubtedly make many of them worse than before because the "check action" of the pylorus will then be done away with, and food, probably undigested, allowed to go where it is not wanted. (If there is irritation in any part of the alimentary tract beyond the pylorus there is apparently a "message" sent to the pylorus to hold food back. In such cases digestion is therefore upset even to the extent of causing vomiting, when relief is obtained usually at once. If a gastro-enterostomy is done in such cases without removal of the cause of the symptoms, it is more than likely that the symptoms will be aggravated because this check action is rendered inert by food passing through the stoma.) I believe that as the principles exemplified in the valuable writings of the Mayos, Moynihan, and H. J. Paterson become more widely known and appreciated we shall hear correspondingly less of this "bogie." I think that the acceptance of the view I wish to combat has been rather pernicious in that it has led surgeons to take an unnecessary risk by excising gastric ulcers in cases where this is unduly difficult so as to avoid the performance of a gastro-enterostomy, which of itself will, I am convinced, cause healing of the ulcer. Gastro-enterostomy should be done as a routine in such cases in order to remove permanently the local conditions which have led to the formation of the ulcer and therefore to prevent further trouble. It matters not whether gastric ulcer is due to purely local causes or whether it is the result of a more general alteration in metabolism resulting in a vciious circle which brings about the breakdown in the stomach.

Aberdeen.

INTRA-MEDULLARY LESION (? GUMMA) OF THE SPINAL CORD WITH BROWN-SÉQUARD PHENOMENON AND RECOVERY.

BY ALFRED BERNSTEIN, M.B., B.S. LOND.,
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A FEMALE, aged 18 years, was admitted to Westminster Hospital on Dec. 8th, 1909, under the care of Dr. F. de Havilland Hall, to whom I am indebted for permission to publish this case. The patient was admitted complaining of pain in the back of the head and neck with stiffness and weakness of the right arm and leg. She first noticed stiffness in the neck about three years ago. About two months ago (October, 1909) there was slight pain in the back of the neck radiating over the back of the scalp, especially on the right side. There was also some numbness on the posterior right scalp. This had continued till the present. In the second week in October there was some weakness in the right arm first noticed in the shoulder, which gradually got worse, and by Nov. 8th the weakness had extended down to the hand. About the same time there was weakness in the right leg, which also got steadily worse. There was no numbness, but some slight tingling in the finger-tips. The patient was a packer. She had an attack of influenza a year ago (December, 1908), and 10 months ago was greatly shocked by her father's death, and "had not been the same since." The father died from phthisis. The mother and the other children had excellent history—no syphilis, cancer, or tuberculosis.

The patient was a well-developed, intelligent, bright girl. Dec. 10th: Pupils dilated, equal, and react normally. External ocular movements normal. Fundi normal. Face, palate, tongue, muscles of mastication normal. No cutaneous anæsthesia to cotton wool. Diminution to pin-prick, heat, and cold on left side of trunk bounded by the middle line, and extending as high as the second left rib in front. Includes also left lower and upper limbs. There is a slight patch of anæsthesia on right lower scalp behind. Marked weakness right upper limb at all joints. No movement impossible except extension of interphalangeal joints. Weakness more marked in distal part of limb. Moderate atrophy of interossei, thenar, and hypothenar eminences of right hand. Diaphragm, intercostals, and abdominal muscles normal. Moderate weakness of right lower limb at all joints against resistance. No movements impossible. Wasting of right arm and leg, especially deltoid and hand muscles. Gait: slight dragging of right leg. Supinator jerks: R. > L. Knee-jerks: R. ++; L. = normal. Right patellar clonus and ankle clonus. Plantar reflexes and abdominal reflexes not elicited. Sphincters normal. No spinal rigidity or tenderness. Other systems normal.

Progress of case.—During the next week the physical signs became more marked, and by Dec. 17th there was ankle clonus on the left side but less than on the right. Likewise left knee-jerk became exaggerated, but not so much as on the right. The atrophy of the muscles increased, especially the hand muscles, which were extremely wasted, giving well-marked "claw-hand." About the last week in December there began to be an improvement, which steadily progressed. On Dec. 31st she had gained 2 pounds 10 ounces in weight. Right arm was slightly stronger and the fingers could be slightly extended. On Jan. 7th right arm and hand much stronger. Thenar and hypothenar eminences filling out and movements improving. No reaction of degeneration. Good reaction to faradism. K.C.C. > A.C.C. Jan. 14th: Sensation in left leg normal. There is now no ankle clonus on left, while that on right is much less sustained than before. Jan. 21st: Still steady improvement. Now only the slightest wasting and weakness of interossei. The other muscles almost normal. Walks quite well. At end of the month patient quite well, and when seen two months later showed no signs of disease and said she never felt better in her life. Lumbar puncture on Dec. 28th gave 25 c.c. of fluid under increased pressure. The fluid was normal, containing only one or two lymphocytes to 1-6 inch field, and cultures were sterile. Wassermann's reaction on Jan. 6th was negative. Unfortunately this was not done until antispecific treatment had been used some weeks, but there was never any reason to suspect either congenital or acquired syphilis, and there was little hope that the use of mercury would be followed by recovery. The treatment was inunctions of mercury together with massage, and internally potassium iodide. The mercury and iodides were well borne.

Remarks.—The lesion in this case was evidently situated in the right half of the substance of the cord, especially the anterior horn in the upper dorsal region. But the nature of the lesion is more difficult to determine. Tumours of the cord, tubercle, &c., a plaque of disseminated sclerosis, would hardly have cleared up so rapidly after advancing so far and so quickly. Neither would anterior poliomyelitis account for all the physical signs. Hysteria is excluded by the marked rapid wasting of the intrinsic muscles of the hand and the absence of other hysterical stigmata. The rapid development of all the symptoms followed by as rapid a recovery after anti-syphilitic treatment seem to point to the specific origin of the lesion, which is supported by the fact that mercury was so well borne.

Spinal gummata are very rare. Gowers and Williamson have described them in the posterior horn. They usually start in the membranes or roots, much more rarely in the substance of the cord, and there is as a rule some associated meningitis manifested by numbness and tingling in the limbs and perhaps some stiffness and pain in the neck. Unfortunately in this case lumbar puncture was not performed till more than two weeks after mercurial treatment was started. It was then quite normal fluid, though in excess and under pressure. Armstrong has reported a case of crural monoplegia with anæsthesia of opposite limb and Mott a similar case.

Bibliography.—Mott: New System of Syphilis. Williamson: Syphilitic Diseases of Spinal Cord. Armstrong: Medical Record, 1892.

A CASE OF INTESTINAL OBSTRUCTION CAUSED BY AN ENTEROLITH SPONTANEOUSLY CURED BY EVACUATION THROUGH AN UMBILICAL FISTULA.

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THREE reasons justify the publication of the following isolated case—viz.: enteroliths are not common; they are specially rare in children; and enterolith obstruction is seldom recovered from by spontaneous evacuation through an abscess.

A scholar, aged 12 years, was admitted to my care in the Dundee Royal Infirmary on Dec. 23rd, 1909. He was the third of five children, one of whom had died aged 45 days from congenital icterus. His mother was well and the other children were said to be "fairly strong." His father had died three years previously from locomotor ataxia. The patient had never been a very robust child. Immediately after birth there seems to have been some inflammation about the stump of the cord and this culminated in an abscess which was incised, but it gave no trouble after that and healed well and completely after six weeks. He was solely breast-fed until he was nine months old, and though troubled with flatulence as a child, was fairly healthy during the first nine years of his life. During that time he was very difficult to please with regard to his food, and seemed to have a special objection to liquid in any quantity, and a predilection for dry food. There is no history of indulgence in porridge. At the age of 9 years he had two "convulsion fits" within a fortnight, apparently hysterical, on hearing of his father's death, and since then, his mother thought, there had been greater difficulty in pleasing him with his food. During the six months preceding his admission he had three attacks of colic or "cramp in the stomach," which came on from no obvious cause and lasted about 24 hours. Each attack began with pain in the region of the umbilicus, and was followed after a couple of hours' duration by vomiting. The bowels were not affected in any way, neither constipation nor diarrhœa being noted or complained of. The attack for which he was brought to hospital had come on ten days previously to admission. The usual pain occurred, was followed by vomiting, and was treated by hot applications. The expected relief in this instance, however, was not obtained by the usual remedies. The bowels were constipated, and the pain was not constant, though it varied much in severity. In many ways the attack simulated appendicitis.

On admission the child looked very ill; the tongue was dry and covered with thick brown fur and the lips with sordes. The temperature was normal, the pulse was 96, and the respirations were 20 per minute. The abdomen was scaphoid and symmetrical, and there was a pointing abscess at the umbilicus which was protruding, inflamed, and fluctuating. It was about this area that the pain seemed to culminate, and elsewhere the abdomen could be palpated pretty easily. There were no tumour, however, and no abnormal dulness. On the day following admission, though sick and vomiting, he was easier because the umbilical abscess had burst and was discharging offensive pus. Then for six days he had less pain and no sickness, and there continued a copious foul-smelling discharge which necessitated frequent dressing, but the boy did not seem to make progress. Two days later, after an increase of pain, the vomiting recommenced and he was unable to retain any food during 24 hours. He seemed thinner and weaker and there was still a large amount of pus pouring from the umbilical sinus. On Jan. 3rd, 1910, 11 days after admission, the sinus was cautiously enlarged under general anæsthesia and a drainage-tube was inserted. This was followed by a diminution of the discharge, but it was noticed on the 5th that there was some fæcal matter mixed with the pus. The slight improvement was maintained for a few days, but by the 10th he was again ill, and thereafter seemed from day to day to be losing flesh and strength. The sinus gradually drew together and appeared to be inadequate for the evacuation of the cavity it led to. Consequently, on Feb. 14th the sinus was enlarged by dressing forceps, and an attempt was made to provide more efficient drainage. This was successful to some extent. On March 5th, while the wound was being dressed, a rounded calculus-like mass presented in the sinus and was easily removed, its escape being accompanied and followed by an unusually large quantity of pus. From that moment the wound healed rapidly and the boy's condition materially improved, and he was discharged healed and looking well and stout ten days later. His general improvement was as striking and remarkable as the improvement in the local condition.

The structure which was discharged proved on examination to be an enterolith. It was globular, measured 2½ inches in circumference, rather larger than an ordinary marble, being smooth for the most part but not polished, and when dried its most striking feature was its lightness. It weighed 24 grains, and, indeed, was considerably lighter than a pith ball of equal size. It bears a striking resemblance in miniature to the concretions commonly found in the colon of the horse.

With the history this child presented, the imperfect health he had enjoyed, and the poor physique he had attained, even in the absence of a history of alternating constipation and diarrhœa, it is not to be wondered at that on admission the diagnosis of tuberculous peritonitis with perforation and the formation of a fæcal fistula was formed; indeed, it is probable that had it not been for the dangerous proximity of a fœtid sinus he would have been operated on under this supposition. Still less is it reprehensible that before admission the previous history, the sudden onset, the constipation, vomiting, and pain, should have led to the diagnosis of appendicitis.

The enterolith was of the light-coloured variety, and as above noted, there was no history of special indulgence in porridge, which is supposed to predispose to the formation of such avenoliths, or oat-stones. It is almost contrary to what one would expect, but characteristic of the condition, that the intestinal obstruction to which the "stone" gave rise should be of a chronic character and spread over years before the condition becomes acute. Where the enterolith lay in this case it is impossible to say. The sinus led from the umbilicus backwards into the right loin, but the obstruction must have been in the small intestine, for a foreign body of its size could not cause obstruction in the great.

There is a considerable, though scattered, literature on the subject, and its perusal and of that of intestinal obstruction from foreign bodies, suggests that in some cases of "gall-stone intestinal obstruction," where there is a history of years of recurring colic and vomiting but no jaundice, the "gall-stone" might prove to be an enterolith on investigation. In the above case the enterolith felt solid and heavy, almost stone-like, when first extruded and was quite as solid and firm as many a single gall-stone. It was only after drying that it assumed its pale yellow colour and showed its peculiar lightness.

Dundee.

NOTES UPON AN OUTBREAK OF ILLNESS DUE TO TINNED MEAT IN THE CITY OF CARLISLE.

BY JOSEPH BEARD, F.R.C.S. EDIN., L.R.C.P. LOND., D.P.H. CAMB.,
MEDICAL OFFICER OF HEALTH, CITY OF CARLISLE.

ON August 26th last I received information of an outbreak of sudden and suspicious illness in the Denton Holme district of Carlisle, which upon investigation was found to have occurred in a number of persons who had partaken of the contents of a tin of American corned beef; 21 persons in all were affected, of whom several were said to be suffering somewhat severely. The illness appears to have manifested itself without any premonitory symptoms by the occurrence of vomiting, diarrhœa, pains in the stomach, and collapse, but fortunately the outbreak was not attended with any fatal result, and all those affected are now well.

I secured what remained of the suspected meat and divided it into two portions, one of which together with the tin I forwarded to the city analyst, Dr. R. Hellon, to examine

the specimen for irritant metallic poisons and any evidence of faulty tinning or accidental punctures in the tin; the remaining portion was forwarded in a sterile bottle to Professor S. Delépine of Manchester for the purpose of a complete bacteriological examination.

Having obtained a list of all who had purchased portions of the meat investigation was then made at each house, which resulted in information being obtained that ten families had made purchases of the meat in quantities of from two ounces to half a pound. In the 10 families 21 persons partook of the meat and in each instance the effect was practically the same, although in some cases the symptoms were more severe than in others. It will be observed that only a small quantity of meat in each case was purchased and the severity of the attack appeared to vary in direct proportion to the amount of the meat eaten, the worst case being that in which one person (a male adult) consumed a quarter of a pound. The earliest symptoms of the disease manifested themselves at periods varying from 15 minutes to 4½ hours after the consumption of the meat, but in the greater number of the cases the interval was about an hour, and in some of the cases in which the symptoms were said to have been severe medical men were called in. The meat was purchased by the shopkeeper from a firm of first-class American packers, and the particular brand of meat to which the tin in question belonged is a brand which has a good reputation for quality and packing.

It would perhaps be advisable here briefly to outline the information obtained with regard to the distribution of the individual portions of meat purchased.

A. purchased a quarter of a pound of the meat on the morning of August 25th, which was partaken of at breakfast by three persons, aged 24, 18, and 15 years respectively; all three were shortly afterwards seized with vomiting, diarrhœa, with collapse, and some loss of power in the lower limbs.

B. purchased a quarter of a pound of the meat in the early morning of the 25th, some of which she partook of and shortly afterwards exhibited the same symptoms as the previous cases.

C. purchased a quarter of a pound of the meat on the night of the 24th, which was taken by her husband to his work and which he ate at 3 A.M. on the morning of the 25th. He was shortly afterwards seized with violent pains in the abdomen, vomiting, diarrhœa, and collapse. He also lost the power of both legs and was removed from his work to the house of a relative who lived near, where he remained for about 24 hours in a dangerous condition.

D. purchased a quarter of a pound of the meat on the morning of the 25th, which was eaten at mid-day by her husband and two children. At 3 P.M. in the afternoon one of the children returned home from school, the husband had to leave his work, and at 5 P.M. the second child became ill; all exhibited symptoms of vomiting, diarrhœa, and collapse.

E. purchased a quarter of a pound of the meat on the morning of the 25th, which was partaken of by her husband and herself. The husband had to leave his work through vomiting and diarrhœa, and later in the afternoon she was attacked with vomiting, diarrhœa, and collapse.

F. purchased a quarter of a pound of the meat on the morning of the 25th, some of which she took for her midday meal, and within an hour she was seized with vomiting, diarrhœa, and collapse.

G. purchased one pennyworth (2 ounces) of the meat on the night of the 24th which she made into a sandwich for her husband. The husband ate this at 3 A.M. the following morning and was shortly afterwards seized with vomiting, diarrhœa, and collapse. The wife whilst making the sandwich ate a piece of about the size of a hazel nut and was seized with diarrhœa shortly afterwards but no other symptom.

H. purchased half a pound of the meat on the night of the 24th, which was eaten for breakfast next morning at 7 A.M. by her husband, two sons, and a niece. At 8 A.M. one son was seized with vomiting, diarrhœa, and collapse, shortly followed by the father, brother, and cousin exhibiting similar symptoms, with the exception of the younger brother, who had no vomiting.

J. purchased a quarter of a pound of the meat on the night of the 24th which she made into a sandwich for her husband, during which process she ate a small piece about the size of a walnut. At 1 A.M. the husband ate his sandwich, and at 3.30 A.M. he was seized with pains in the abdomen, vomiting, diarrhœa, and collapse. He managed to get home, and on arriving there found his wife in a similar condition. His wife was quite well in 24 hours but he was not fit for work for five or six days.

K. purchased a quarter of a pound of the meat on the night of the 24th, part of which she and her father-in-law partook. They were both seized shortly afterwards with vomiting, pain in the abdomen, and some collapse.

On August 29th I received the following provisional report from Dr. E. J. Sidebotham, assistant to Professor Delépine in the Public Health Laboratory, Manchester:—

The specimen showed no appearance of decomposition, but it is extensively infected with micro-organisms. These can be seen with a low magnification forming colonies on the surface, and they have been obtained by cultivation from the interior of the meat. The forms so far isolated are not ones usually associated with cases of food poisoning. Further investigations are being made, and a report will be sent as soon as possible. The specimen is unfit for human consumption.

I also received the following provisional report dated Sept. 1st from Dr. Hellon upon the chemical examination of the meat:—

In compliance with your request I have made a most careful chemical examination of the American corned beef which I received from you on 27th ultimo. My search has been directed chiefly to the discovery of the presence or absence of arsenic, tin, and lead, and incidentally to that of other metallic poisons. The result of my investigation has been to show conclusively the absence of any poisonous metal which could have caused the illness you have described to me. I am therefore convinced that if (as appears probable from the symptoms) this illness was caused by an irritant poison, the poison was not a metallic one.

On August 31st I received a further report from Dr. Sidebotham as follows:—

The meat had no unpleasant smell and there were no signs of decomposition. On inspection with a low magnifying power numerous colonies could be seen on the surface. These were examined microscopically and found to consist of cocci and small bacilli. On cultivation numerous organisms were obtained both from the interior and the outer surface of the meat. These consisted of cocci of two sorts and a yeast. By anaerobic cultivation two sorts of bacilli were obtained. None of these organisms were of the sort usually associated with cases of the gastro-intestinal form of food poisoning.

The following experiments were carried out. Three guinea-pigs and three mice were fed with portions of the meat; one of the guinea-pigs died in 48 hours, but post mortem there were no signs of gastro-intestinal irritation and no obvious cause of death was found. The other guinea-pigs and the mice were unaffected. Two guinea-pigs were inoculated subcutaneously with a watery extract of the meat and were unaffected.

A substance was obtained by the chemical method used for isolating toxins. This was tested by subcutaneous inoculation of a guinea-pig and caused no ill-effects. The meat is extensively contaminated and quite unfit for food, but we have not succeeded in isolating the organism or substance which has rendered the meat pathogenic.

Whilst waiting for the report of the city analyst upon the condition of the tin, I wrote to Dr. Sidebotham asking him if he would supply me with further information relating to the morphological and other characteristics of the bacilli under observation seeing that they were, in his opinion, unclassified varieties, in reply to which I received the following report:—

1. A staphylococcus which produces yellow colonies on agar and gelatin, liquefies gelatin somewhat slowly.
2. A staphylococcus which produces white colonies on agar and gelatin, liquefies gelatin rapidly. These two organisms were very abundant, and in about equal numbers.
3. A small yeast which was present in very small numbers.
4. Bacilli of two varieties which were obtained by anaerobic cultivation of the meat, of which the relative numbers were not obtained. As none of these organisms showed any pathogenic action on guinea-pigs and mice it was not thought necessary to carry the investigations further.

Dr. Hellon's report upon the tin is as follows:—

In compliance with your request I have returned to you the tin which contained the corned beef suspected of having caused the illness in Denton Holme, also the label which I detached from the tin. I have carefully examined the tin with a lens but have been unable to discover any perforation or opening through which air might have leaked in. As a test I filled the tin with boiling water, and after the water had cooled I carefully searched the outside of the tin with a lens for minute drops of water but found none. The loose top of the tin could not be subjected to this water test, but the lens showed no flow in the soldering through which air might have entered. I am therefore of opinion that the tin was sound and airtight.

The last two reports conclude the bacteriological and chemical investigation. The report of Dr. Hellon showed pretty conclusively that the meat could not have been infected after leaving the packers as a result of faulty tinning or subsequent accidental punctures; furthermore, it must be remembered that the principal organisms under observation were of the anaerobic variety. The questions for me to decide were: (1) at what period the meat became infected; and (2) whether the infected meat was responsible for the outbreak of illness.

With regard to the first question, the meat might have been infected at some period either before or during the process of tinning or after the meat was opened at the shop, but the latter theory is negatived by the fact that the principal organisms present were of the anaerobic group, that the portions of meat were purchased by the several householders so shortly after the tin was opened and eaten within a very short interval following—so short, indeed, that the amount of the growth of the organisms present in the meat would have been impossible, even assuming that they had been of the aerobic variety. Therefore, upon the evidence I am convinced that the meat was contaminated previous to, or at the time of, tinning at the factory in America.

In deciding the second question due regard must be given to the fact that not only was the history as to the consumption, onset, and other clinical features the same in each case, but also (*a*) that the vomiting, diarrhœa, and other symptoms came on suddenly and acutely within a very short interval of eating the meat; (*b*) that every person who partook of the meat was ill; and (*c*) that the meat in question was the only article of food eaten in common by the several persons affected.

Outbreaks of food poisoning are not altogether uncommon and do not always terminate so favourably as the one under review. In this class of poisoning the ill effects are due to the ingestion of pre-formed poisons which are elaborated by the micro-organisms in the infected food. The poisonous agent does not undergo any further bacteriological change in the human system, and thus, there being no period of incubation, the symptoms come on suddenly, which constitutes an important comparison to that class of cases in which the illness is due to the development or proliferation of the micro-organisms within the blood or tissues of the body.

In criticising the bacteriological reports, which were to the effect that neither the feeding nor the inoculation experiments upon the guinea-pigs and mice gave rise to a fatal issue, it must be remembered that the effect of all toxins is proportionate to the virulence of the toxin and the amount received into the system, and as there appears to be no doubt that the portion of the tinned meat eaten in each case was the cause of the illness, the experimental results by Dr. Sidebotham, together with the non-fatal result of the outbreak, confirms me in my opinion, as expressed to my committee in a report dated Sept. 2nd, that the toxins at the time the meat was eaten were in all probability not of a very virulent nature.

Carlisle.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF THERAPEUTICS AND PHARMACOLOGY.

Action of Sulphur as Intestinal Antiseptic.—Experimental Administration of Drugs of the Digitalis Group.

A MEETING of this section was held on Nov. 15th, Professor A. R. CUSHNY, the President, being in the chair.

Professor R. B. WILD (Manchester) read a paper on the Action of Sulphur and Certain of its Compounds as Intestinal Antiseptics. In addition to its action as a mild purgative, sulphur has a definite antiseptic action in the intestine owing to the formation of H_2S when bacterial decomposition takes place in its presence. To this action may probably be attributed the traditional efficacy of sulphur and of sulphurous waters in chronic gout and rheumatism, and in certain skin eruptions. The superiority of sulphates as purgatives is in part due to their reduction to sulphides in the bowel. The preponderance of plants containing sulphurous volatile oils among those used dietetically is remarkable. Long-continued administration of sulphur causes depression. Sulphur is tasteless, insoluble in the stomach, without action on digestive enzymes, forms in the intestine antiseptic substances which penetrate to all parts of the bowel, has valuable laxative properties, and is cheap.

Dr. H. HUME TURNBULL gave a further account of the Experimental Administration of Drugs of the Digitalis Group under Dr. James Mackenzie and Professor Cushny, which the latter dealt with in his presidential address. Strophanthus was only about one half as active on man as digitalis, B.P. tinctures being used in both cases. Cases of rheumatic disease were most distinctly benefited, and especially those with auricular fibrillation. For the latter class of case the pushing of digitalis was the essential treatment. The drug was given in full doses until "physiological" effect (nausea, vomiting, headache, giddiness, &c.) appeared, then stopped and recommenced in smaller doses till the minimum amount which would control the heart was found. The intelligent patient could then be left to dose himself by his own sensations. In cases with partial heart-block great care was necessary.

A lively discussion followed, in which the following took part: Dr. HARRINGTON SAINSBURY, Dr. E. I. SPRIGGS, Dr. J. GRAY DUNCANSON, Professor WILD, Dr. H. H. DALE, Dr. CAMERON, and the PRESIDENT.

Dr. TURNBULL replied.

MEDICAL SOCIETY OF LONDON.

Heart Strain and Dilatation.

A MEETING of this society was held on Nov. 28th, Mr. CHARTERS J. SYMONDS, the President, being in the chair.

Dr. J. F. GOODHART read a paper on Heart Strain and Dilatation, which is published in full on p. 1607 of this issue of THE LANCET.

Sir R. DOUGLAS POWELL, in the course of the discussion that followed, said that he agreed with Dr. Goodhart that a large number of cases of dilated heart existed in the imagination of the observer. In regard to cases of so-called heart strain the most important point was that of diagnosis. It certainly was his experience that many of the cases in which the condition was brought about by excessive athletic exercises in which symptoms were attributed to the heart were cases in which there was a very great amount of anæmia. He had observed that people who had overtaxed their muscular system for a long time were apt to become anæmic. He had the utmost respect for the importance of X ray photography in certain conditions of the heart and aortic disease, but he did not think X ray photography was of much value in estimating the minute shades of differences in cardiac dilatation.

Sir LAUDER BRUNTON thought that there was much similarity both in pathology and treatment between strain of a joint and strain of the heart. If the strain of a joint was slight it was best treated by gentle movement from the first, but if it were severe perfect rest was required at first and gentle exercise afterwards, and the same was the case with cardiac strains. Cardiac dilatation might sometimes be due to causes in the central nervous system, but one of the most typical cases he had seen was in a healthy young officer who carried a heavy man on his back round the barrack yard for a wager. In disordered heart of advancing years one had to remember the importance of the general nutrition in which the heart shared, and exercise was often very beneficial for that.

Dr. HENRY DAVY urged the great importance of recognising the connexion of decayed teeth with the condition under discussion. He narrated the facts of a case of a patient of his of about 63 years of age, who was a teetotaler and never had syphilis nor any other disease, and yet had manifest atheroma of all his arteries and a hypertrophied heart with the apex beat well outside the nipple and a feeble unsatisfactory pulse, with an occasionally soft mitral systolic bruit after much exertion. He had always been athletic, had captained the cricket team at a public school, and was a university "blue" in cricket and football. He was said to have suffered from "heart strain" when at college and was just one of those cases which might be put down to over-athleticism. But that clearly was not altogether the explanation of his condition. A few months after seeing the patient his sister came under Dr. Davy's care in precisely the same condition as her brother; if anything, the atheroma and feebleness of the heart muscle were worse. That lady had never done any muscular exertion in her life; she had, on the contrary, always led a sedentary life, and the chief point in which she agreed with her brother was in having very bad teeth; in fact, neither her dentist nor Dr. Davy himself had ever seen teeth in a worse state of decay. It was clear, therefore, that the condition in the man was not due altogether to his former

athletic life, and Dr. Davy was still looking for a case in which muscular exercise had damaged a perfectly healthy heart.

Dr. W. COLLIER (Oxford) said he was often consulted in the case of athletes with definite dilatation of the right side of the heart, and occasionally mischief on the left, concerning the advisability of these patients indulging in hard athletic exercises, and in such cases he had vetoed such exercise. The physical signs and symptoms upon which he relied were abnormal epigastric pulsation and a definite murmur running up the left side of the sternum systolic in time.

The debate was adjourned until Monday, Dec. 5th.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

President's Address on Some Recent Clinical Experiences.—Locomotor Ataxy.

A MEETING of this section was held on Nov. 11th, Sir JOHN MOORE, the President, being in the chair.

In his introductory address the PRESIDENT embodied notes of a number of cases, perhaps of every-day clinical experience, but which, in his opinion, threw more or less light upon obscure features in diagnosis and pathology or illustrated some practical points in treatment. Speaking of lobar distribution of pneumonia in childhood, he said that nothing was more remarkable in the epidemic history of Dublin during the last quarter of a century than the steady decline in prevalence of enteric fever, the all-but disappearance of typhus fever, and the ominous increase of acute pneumonia—a disease which was much more appropriately termed "pneumonic fever." This acute infection had, in fact, taken the place of the old classical continued fevers in the nosology of the Irish capital. Many of their pneumonia patients in recent years had been children of quite tender age. According to the old teaching one would have expected to meet with a lobular rather than a lobar distribution of mischief in the lungs in such circumstances. But the reverse was the fact. This point was illustrated by a series of eight cases of pneumonia in children aged from 6 months to 4 years. A further case of acute pneumonia was quoted to show that apical fibrinous pneumonia resolved slowly. And in yet another case lumbar puncture was performed with immediate benefit to the patient. Two examples of ataxic typhoid fever were described, recovery taking place in each instance. The President laid stress on the extreme therapeutic value of camphor as a stimulant, antiseptic and sedative. Two other cases were given in illustration of the diagnostic value of Widal's test. One, in which the test was negative, proved to be acute general tuberculosis. The address concluded with reports of a case of amyotrophic lateral sclerosis and of a remarkable staphylococcic infection causing a six months' fever and controlled by vaccination with an antistaphylococcic vaccine.

By permission of the President, Dr. W. BOXWELL showed another case of Amyotrophic Lateral Sclerosis. The case was an early one, giving a history of weakness and wasting in the hands and arms of only two months' standing. The patient was a woman, aged 20 years, who on admission to hospital showed the typical wasting and paresis of the hands and forearms. Her legs were also partially paralysed, with well-marked "dropping" of her right foot. There was no wasting of the legs, however, and the jerks were increased in all four limbs. There was slight increase of the "jaw-jerk," but no other evidence of bulbar involvement. When the patient came to hospital she could scarcely stand, and could not walk at all without assistance. She had, however, much improved, and could now walk pretty well, though the dropping of the right foot was still noticeable.—Dr. T. G. MOORHEAD said that this was the most marked and youngest case of the kind he had ever come across. He thought it was rather the exception than the rule to find an increase in the reflexes in the lower extremities.

Three cases of Locomotor Ataxy were exhibited as follows:—

Dr. J. F. O'CARROLL said the odd thing about his case was that up to two months ago the man was driving a car. While still driving he noticed himself staggering a little in his walk about August 1st. His sight had been failing since the beginning of September, and he could now see practically nothing. He had a primary atrophy of both optic discs. He had well-marked myosis, and there was no accommodation for distance other than the slightest in the right eye. He had anæsthesia and slow perception of sensory stimuli. Now and again there had been some slight incontinence of urine, which he was able to stop when he perceived it. He had had a good deal of constipation, and when he had a purgative his bowel prolapsed six or eight inches with little or no distress. He was also insensitive to retained urine, as 15 ounces had been taken away after he thought he had finished passing water. He was insensitive in the middle division of the fifth nerve to pain and touch. He had no history of lightning pains, but spoke of pains like rheumatism. He had no knowledge of having had syphilis, but he acknowledged that he had been in the way of contracting it.

Dr. J. B. COLEMAN showed a case of six or seven years' standing, the ataxy being badly marked. There was a history of lightning pains. There were Argyll Robertson pupils, loss of knee-jerks, and Romberg's sign. The patient had perforating ulcer of the foot. The ulcer began in a corn, which he cut. About six months ago a small sore appeared, which had gradually deepened. There was some suppuration but little or no pain. The ulcer was on the ball of the little toe.

Dr. M. DEMPSEY exhibited a case in a man 41 years of age. Twenty years ago he had contracted some venereal disease, followed by a slight rash on the skin. About four years ago he became dizzy and had to take to bed. As long as he was in bed he felt he had good power over his limbs, but he was unsteady when out of bed. Shortly afterwards his external rectus became paralysed. When he looked towards the right he saw two images. This was operated on and relieved to some extent. He had suffered from pains, which he described as boring in character, below the knee, not shooting but stationary. The pupil dilated when the neck was pinched. One was a little eccentric. His sensory phenomena were moderately marked. He had a little subjective anæsthesia. The fluid from a lumbar puncture taken that day showed a lymphocytosis. He had loss of heel-jerk and knee-jerk. His epigastric reflex was well marked; so was the umbilical.

NEWCASTLE-ON-TYNE CLINICAL SOCIETY. — A meeting of this society was held in the Geographical Institute on Nov. 10th, Dr. E. Napier Burnett, the President, being in the chair.—After an exhibition of cases to a large gathering, Dr. D. Wells Patterson read a paper on the Treatment of Certain Diseases of the Skin by Solid CO_2. At the outset he showed that the idea of treating certain skin diseases by means of cold applications such as ethyl chloride and liquid air was not a new one, but that in solid CO_2 we had an agent which was much more easily handled and therefore could be used in many different ways. He deplored the fact that as a rule extravagant claims were made for new remedies. He sketched the actual history of the use of solid CO_2. He then described the method of production of the snow, its moulding into pencils, and its application to patients. He noted that the aim of the treatment was to produce a certain reaction in the tissues, which reaction might be something between a slight erythema and a complete superficial necrosis of the skin. He urged the necessity of great care in its use because of the possibility of subsequent trouble arising, especially in tissues the vitality of which might be impaired—e.g., those of alcoholics, diabetics, and arterio-sclerotics; and further in those tissues which immediately overlay bone with little subcutaneous tissue. Another point which he raised was that in this process tissue cells, both normal and abnormal, were undoubtedly damaged and that in so far as they were still in the dark as to the etiology of malignant disease greater care should be taken. He here quoted Ribbert that the proliferative power of the various component cells of a tissue is regulated by "tissue tension," there being in health a condition of equilibrium among the various tissue elements; any pathological disturbance of such an arrangement might conceivably lead to the weakening of some inhibiting power

on the part of the less resistant tissue elements, and that this weakening might lead to a vegetative proliferation of these elements with the result of the formation of a neoplasm. Time alone could prove this possible danger to be real or imaginary, and while not wishing to be considered an alarmist, he urged the necessity of carefully choosing cases and as carefully noting the results. Preliminary antiseptic treatment of the skin was not generally carried out, but in view of the fact that many pathogenic bacteria could be exposed to very low temperatures without impairment of vitality Dr. Patterson considered that it would be profitable so to carry it out. The classes of cases in which he had used the method and obtained satisfactory results were: 1. Nævi of the pigmented mole and capillary types. 2. Certain cases of lupus vulgaris, though for the majority of cases of lupus he was doubtful of its value. 3. Lupus erythematosus, in which he had obtained very satisfactory results. 4. Rodent ulcer; small and soft rodent ulcers were satisfactorily treated by solid CO_2. He advocated in these the additional use of scraping with the curette in the frozen tissue under strict antiseptic precautions, and later treating the raw healing surface with the X rays. 5. Warts. The disadvantage here was the increase of time necessary for the application. 6. Hypertrophic scars and true keloids also reacted satisfactorily. Dr. Patterson concluded by pointing out the advantages of the method and its easy use, adding that in the latter there might lurk danger. The paper was illustrated by a series of cases.

Reviews and Notices of Books.

Hereditary Characters and Their Modes of Transmission. By CHARLES EDWARD WALKER, M.Sc., &c.; Director of Research in the Glasgow Cancer Hospital, &c.; Author of "Essentials of Cytology." London: Edward Arnold. 1910. Pp. 239. Price 8*s.* 6*d.* net.

THE appearance of this book, as well as that of two others noticed below, testifies to the increasing interest taken in the subject of heredity by workers and thinkers in many fields. The importance of this subject is scarcely greater than the difficulty of its study, and such an exceptionally lucid and thoughtful book as that now before us should meet with the welcome and command the consideration that it so fully deserves at the hands of all serious students. The author, already well known as an able worker in the field of cytology, emphasises, with justice, the importance of the study of cell phenomena in connexion with the problems of heredity, and devotes the first two chapters to a description, with good illustrations, of this aspect of the subject. The accounts given of current knowledge and of the author's own observations regarding the changes occurring in the fertilised ovum are remarkably clear. These chapters form an introduction to the rest of the book, which is written throughout with equal ability and clarity.

Although this work may certainly be regarded as an exceptionally good and critical compendium of the various views concerning heredity, and, as such, a highly instructive introduction to this study, it is specially marked by the setting-forth of a new theory concerning the "modes of transmission" of hereditary characters. The author states in the preface that, in attempting to apply recent discoveries, as well as experimental work upon cells, to some of these problems, he believes he has arrived at a satisfactory harmonising of the results of the Mendelian experiments with the observations of the biometricians. This, he says, has been done by showing that some parts of the cells involved in fertilisation are "distributed" in an alternative manner, while others simply divide in bulk. He thus puts forward a theory, dividing characters into "individual" and "racial," and attributing to each set of characters a different mode of "transmission." The so-called *individual* characters are transmitted, in the "Mendelian" or alternative manner, by the chromosomes; while the *racial* characters are blended and transmitted "by the potentiality of the whole fertilised cell."

It would be impracticable to enter fully within the limits of this review on the reasons which seem to throw some doubt on the soundness of this new hypothesis, and on the author's claim to have harmonised the results of the two biological schools which he mentions. However, a few difficulties and obscurities may be indicated. "Individual" characters are defined (on p. 184) as "either individual variations or characters inherited from a parent, which are not common to the race, but are confined to individuals that have inherited a variation from a near ancestor." This seems to be somewhat vague, and scarcely a definition in the strict sense, but rather a description of the meaning of the word as used by the author himself in setting forth his theory. Again, while holding that "individual" characters are recent, and that racial characters are ancient, the author has to admit that sex, which he regards as an individual character and as transmitted alternately, differs widely from other individual characters in this respect. Once more, the author in several places seems not to recognise any difference between "transmission" and "reproduction." Indeed, when discussing Mendelian views he suggests that the contention of Dr. Archdall Reid, that there is no real alternative inheritance in the case of "Mendelian" characters, but only alternative reproduction—or alternative patency and latency—is only a play on words. But the "character" of sex is not always produced "alternately," and an admittedly racial character may reappear in a cross when both parents lack this character; and thus a valid difference between inheritance and reproduction becomes apparent.

A very close agreement with the views and arguments of Archdall Reid, as set forth both in his earlier works and in his recent and important treatise on the "Laws of Heredity," may be noted in this volume. This is especially remarkable in Chapter IX., which deals with the Lamarckian view of the inheritance of acquired characters and the persistent misunderstanding or misrepresentation of "Darwinism" which pervades the writings of the present followers of Lamarck and Herbert Spencer. In many parts also of the chapter on Mendelism, and on the function of sex, as well as of the final chapter of conclusions, the author's line of argument is almost the same as that of Reid. In making this comparison we do not imply any disparagement of the extremely able and suggestive book which is the subject of this notice. The book bears every mark of independent thought and conviction. The author has evidently read widely and has made his own every conclusion which he has endorsed. He has produced a valuable contribution to the study of heredity, which will certainly take a serious place among writings on the subject, whether or not the special hypothesis which is set forth in it may fail to withstand the application of further tests.

Phases of Evolution and Heredity. By DAVID BERRY HART, M.D. Edin. London: Rebman, Limited. 1910. Pp. 259. Price 5*s.* net.

THE first five chapters of this book consist of short accounts and slight criticisms of some theories of heredity, leading up to a speculation on the origin and transmission of variations. In setting forth the speculation, which is termed "An Intrinsic Theory of Variation and Its Transmission," the author mainly relies on the observations and hypotheses of Mendelians, Mutationists, and Biometricians, and apparently takes no account of the views held by the majority of biologists who belong to none of these schools. In speaking of the inheritance of acquired characters, for instance, he seems to imply that all biologists, other than

those whose views he adopts eclectically as the foundation of his hypotheses, are "looking about for some mechanism that will make the actual somatic variations or injury causal in the germ-cells."

To put it briefly, the "theory" suggested by himself is that "the gametes, before combination to form a zygote, do not contain the complete outfit of determinants necessary to form an adult and its progeny"; that changes in the zygote make up the necessary complement; and it is these zygotic changes which produce the results known as "Mendelian." There is, according to him, a "propagative" and "somatic" part in each zygote, the former being the "primitive germ-cell mass" from which the future gametes will spring, while he latter gives rise to the body of the future individual. In the propagative part lie the determinants for the race; in the somatic part the determinants for the individual. In another place the author, in effect, sums up as follows his statements on Variation: the primitive germ-cells, which give rise to the gametes, arrive at the sexual gland without variation. In the gland they undergo variation in the determinants of the "unit characters," according to the Law of Probability. After the union of the gametes to form a zygote the "phenomena of Mendelism" arise, by which the unit characters are distributed in the zygote, again according to the Law of Probability. The author adds: "What biometricians may make of this speculation I do not know." What other biologists might make of it appears also a little problematical. While there is evidence in this book that the writer has read much and thought deeply round some of the problems of heredity, we cannot help missing a comprehensive grasp of the subject, such as would have given the critical power necessary to treat the various hypotheses and observations which he seeks to harmonise in the establishment of his own views.

The latter part of the book consists of more or less disconnected, though often interesting, essays.

The First Principles of Heredity. By S. HERBERT, M.D. Vienna. London: A. and C. Black. 1910. Pp. 199. Price 5*s.* net.

THE purpose of this book is to supply what is "desirable for the average intelligence to know" about heredity without assuming any previous knowledge of the subject on the reader's part. The author makes, therefore, no claim to originality, but he has achieved his stated purpose as well as could be expected considering the small space to which he has confined his compendium of various teachings on this very complex subject. The absence, however, from this book of sound critical leading must leave, we think, very indefinite impressions on the reader's mind, and we incline to the view that all those who really desire to understand the subject, or, still more, to pursue it further, should begin their study with one of the larger treatises, which deal more thoroughly and comprehensively with the problems of heredity.

The chapters on "Reproduction," "The Germ-Cells," "The Inheritance of Acquired Characters," and "The Inheritance of Disease," show that the author is well acquainted with the best literature on the subjects and deserve very high commendation. One pronouncement which the author makes in his final chapter seems to us to be dangerous doctrine, especially in a book which deals with problems of which few solutions are universally accepted. It is stated that "a science, in order to become a real science, must contain certain leading principles, serving at the same time as a unifying bond of the organised knowledge and *giving us working ideas for our guidance in practical life.*" Surely science is science still, in the full meaning of the word, even when inquiry duly conducted is unable to arrive at the goal indicated in this quotation. Scientific inquiry, as such, has no such goal, however imperative it may be for us to direct all practical action, as far as possible, on principles which are indicated and justified by science.

Practical Physiology. Edited by M. S. PEMBREY, M.A., M.D. Oxon. Third edition. Illustrated by 256 diagrams and tracings. London: Edward Arnold. 1910. Pp. xviii.-480. Price 14*s.* net.

FIVE years have elapsed since the second edition of this work was issued and eight since the first. Instead of five contributing authors there are six, and though the number of pages has been reduced from 503 to 480, the volume is a thicker one than its immediate predecessor. In the former editions the subjects were classed into four parts and were arranged as elementary and advanced. A much better method is adopted by keeping experimental and chemical physiology apart. Wisely, we think, the experiments on muscle and nerve have been reduced, and the observations which can be made upon man have been increased. A short contribution of eight pages on X rays for the investigation of motor functions of the alimentary canal is made by Dr. A. F. Hertz.

The chief changes are those of transposition and rearrangement of the subject matter. The first 50 odd pages are identical with those in the previous editions; 10 pages are transferred from the advanced part, a few pages being omitted, such as those dealing with isometric and paradoxical contraction and Pflüger's law, and the effects of some drugs, and the result is that 92 pages are given to nerve-muscle physiology instead of 106. To the circulation 79 pages are devoted instead of 72. The *a.-v.* bundle is figured, and a few additions are made in the text, while there are some omissions, such as cardio-pneumatic movements and the tortoise heart (Chapters XXV.–XLII.). Under the head of the Pulse we do not find an account of Pachon's sphygmometer, which seems to us a very sensitive instrument. Fig. 140 is named "the kymograph," while in the former edition it is given as "the Hürtle kymograph," perhaps a needful term as there are so many varieties of kymograph. About 25 pages are devoted to respiration, to which a few additions have been made. There is no very material change in the chapters on the central nervous system and the special senses. From the latter there are a few commendable omissions.

About 200 pages are devoted to "Physiological Chemistry," some of the chapters previously assigned to Dr. J. J. R. Macleod being relegated to Dr. Martin Flack. The chapters on carbohydrates and proteins are brought up to date. The photographic spectra of hæmoglobin appear to be omitted, while new chapters are added on inorganic acid radicles of urine, on lactic acid (J. H. Ryffel), and on hæmolysins and precipitins. Milk can hardly be called an "opalescent solution" (p. 326). In the experiment (p. 332) it might be well to state which "salted plasma" is used, and the clotting of blood might be compared with that which occurs in muscle as well as with milk clotting. In the chapter on blood we do not find Katyama's test for HbCO, which, whatever its precise value, gives a very striking reaction; nor is Rubner's test included. The bands of Soret in the ultra-violet spectrum seem to be omitted. It would be useful to add a simple test for the detection of iron in the bile. For the somewhat dubious statement in the second edition "a diet containing it (proteid) alone can serve as an efficient food" (p. 209), we have "a diet containing protein and salts alone can serve as an efficient food." Additions have been made here and there to the chapters on digestion; "Grutzner" on p. 386 should be "Grützner." Autolysis seems to be omitted.

This edition will certainly prove as useful to students as its predecessors, and our little criticisms, which may seem meticulous, are made with the idea that a fourth edition will be called for, when the indications furnished may be serviceable. The price is raised from 12*s.* 6*d.* to 14*s.* net.

Military Hygiene. By ROBERT CALDWELL, F.R.C.S. Edin., D.P.H., Lieutenant-Colonel, R.A.M.C.; Specialist Sanitary Officer, Pretoria, Potchefstroom, and Natal; late Specialist Sanitary Officer, Western Area, Southern Command, &c. Second edition. With 80 Illustrations. London: Baillière, Tindall, and Cox. 1910. Pp. 580. Price 12*s.* 6*d.* net.

THE reception accorded to the first edition of this book has encouraged the author to hope that a second venture on a somewhat more ambitious scale might not be out of place. Lieutenant-Colonel Caldwell, while addressing the present edition primarily to officers of the Royal Army Medical Corps, expresses a hope that it may also prove useful to all branches of the service, and therefore conveys his information in the simplest language consistent with the subject.

The book opens with a chapter on "The Work of the Microbe" in relation to armies in the field, and many interesting references are made to the prevalence of disease from early times down to the South African war. Then follows a dissertation on immunity which acts as an introduction to the discussion of the subject of inoculation against enteric fever by antityphoid vaccine, the method of preparation and dosage of the vaccine, and some statistics are quoted to prove the advantages of inoculation. Enteric fever, the relation of its propagation to camps, personal contact, food, carriers and other sources, form the subject-matter of the following chapter, which closes with a further list of statistics connected with the results of antityphoid inoculation. The next seven chapters are devoted to the discussion of the following diseases—dysentery and diarrhœa, malaria, plague, pneumonia, contagious ophthalmia, dengue, jaundice, cholera, Malta fever, barrack-room sore-throat, and parasitic diseases. The portion dealing with animal parasites will prove useful, notwithstanding that the descriptions of the parasites themselves and their ova have been purposely omitted, the author assuming that his readers have a sufficient knowledge of their characteristics. Sanitary organisation is the subject matter of Chapter XII., and the medical departments of both the United States and our own army come in for a fair amount of comment. Stress is laid on the necessity of including the principal medical officer of a division on the staff of the general officer commanding; at present he is not included, and we have before now pointed out that the omission is regrettable. The physical training of the soldier is dealt with in the succeeding chapter; the methods of carrying equipment are well illustrated by clearly produced photographs of soldiers in the "marching out" kit of different armies, including our own. In the next chapter sanitary matters connected with the maintenance of good health amongst soldiers, such as water, air, food, clothing, &c., are treated in detail. The author in passing (p. 288) very rightly draws attention to the unsound procedure of the authorities in detailing any available medical officer, without any regard to particular qualifications, for boards for the purpose of inspecting and reporting upon the sanitary condition of newly-constructed quarters: an officer skilled in sanitary science should rather be selected.

The sections dealing with meteorology, climate, and geology are all well compiled, and a geological map of the United Kingdom (in colours), which has been very creditably prepared by Messrs. Longmans, Green, and Co., is an attractive feature which may be of service in the selection of camping grounds. Chapters XXV.-XXVII. deal with the methods of sick transport (special prominence being given to the methods of Colonel H. G. Hathaway, A.M.S.), routine duties of medical officers, infectious diseases, alcohol, buildings, and tents, all these subjects being treated in an interesting way and well illustrated by diagrams and photographs. The last chapter, on Physical Degeneration in its Connexion with the Army, containing as it does a contrast between military and civil life, forms a good conclusion to a good book.

Lieutenant-Colonel Caldwell is to be congratulated on his painstaking efforts; he has evidently worked hard to collect facts connected with the hygiene of the soldier, and the references he makes to the published writings of his brother officers indicate a generous loyalty to their work, while greatly adding to the value of his own, which thus affords a ready reference to original sources. From his own experiences the author is able to add to the value of these writings by personal observations and views. The book is well indexed; great care has apparently been exercised in the reproductions of diagrams and photographs, the latter especially being excellently reproduced.

Urgent Surgery. By FÉLIX LEJARS, Professeur Agrégé à la Faculté de Médecine de Paris. Translated from the sixth French edition by WILLIAM S. DICKIE, F.R.C.S. Eng. With 20 full-page plates and 994 illustrations. Vol. II. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. Bristol: John Wright and Sons, Limited. New York: William Wood and Co. 1910. Pp. 580. Price 25*s.* net.

THE favourable opinion which we expressed in reviewing the first volume of this excellent translation of Lejars' well-known work on the surgery of emergencies is fully confirmed by the examination of this, the second and concluding volume. It deals first with the genito-urinary organs, and includes such subjects as curetting the uterus, renal decapsulation, rupture of the urethra, and the treatment of distended bladder. The surgery of the rectum and anus and of strangulated hernia follows. Dislocations naturally are described and fractures also, and the volume ends with urgent amputations, wounds of tendons and joints, and acute osteomyelitis.

The prodigality with which the illustrations are provided enhances greatly the value of the work to the reader, for suitable diagrams or illustrations frequently explain much more clearly than many words. We gladly bear witness to the value of the work and wish it in its English dress the success which the original has attained.

JOURNALS.

The Journal of Physiology. Edited by J. N. LANGLEY, Sc.D., F.R.S. Vol. XLI., Nos. 3 and 4. London: C. F. Clay, Cambridge University Press. Nov. 9th, 1910. Price 8*s.* 6*d.*—The articles contained in these numbers are: 1. The Secretion of Urine, by Joseph Barcroft and Hermann Straub, from the Physiological Laboratory, University of Cambridge. The authors find that the diuretics they have studied fall into two groups—(1) those which produce urine without alteration in the gaseous exchange of the kidney (Ringer's solution and NaCl in hyper- and hypo-tonic solutions); and (2) those which cause increased gaseous exchange (urea, caffeine, sodium sulphate), to which may be added phloridzin. They find also that clamping the kidneys for 15 minutes after washing out the vessels with Ringer's solution does not abolish its power of secretion. 2. On the Governing Influence of Environment on Enzymic Action, by F. W. Pavy, M.D., LL.D., F.R.S., with the collaboration of H. W. Bywaters, D.Sc., Ph.D., F.I.C., from the Physiological Laboratory of the University of London, South Kensington.

The authors show that the inverting power of an aqueous extract of yeast is increased ten to fifteenfold by the addition of a boiled extract of yeast, which is essentially due to the acidity of the boiled extract. After desiccation treatment with alcohol or grinding up with kieselguhr greatly enhanced enzymic action as shown in the aqueous extract. 3. The Mode of Union of Certain Poisons with Cardiac Muscle, by H. M. Vernon, from the Physiological Laboratory, University of Oxford. The effects of perfusing the tortoise heart with oxygenated Ringer's solution, containing alcohol, ether, hydrocyanic acid, sodium chloride, and formaldehyde, are given. 4. The Action of Atropine, Pilocarpine, and Physostigmine, by Arthur R. Cushny, M.D., F.R.S., from the Pharmacological Laboratory, University College, London. 5. The Composition of the Gases of the Blood in Chloroform Anæsthesia, by G. A. Buckmaster and J. A. Gardner, from the Physiological Laboratory, University of London. 6. Visual Phenomena Connected with the Yellow Spot, by F. W. Edridge-Green, M.D., F.R.C.S., Beit Medical Research Fellow. 7. The Influence of Carbohydrate and Fat on Protein Metabolism, by E. P. Cathcart and M. Ross-Taylor, University of Glasgow. This article gives the effect of phloridzin glycosuria. These numbers contain also the proceedings of the Physiological Society for Oct. 15th, 1910.

ST. MARYLEBONE GENERAL DISPENSARY.—A festival dinner to commemorate the 125th anniversary of the foundation of this charity was held at the Langham Hotel on Nov. 24th. The company consisted of nearly 100 friends of the dispensary, with Lord Howard de Walden in the chair. The list of speakers included Sir R. Douglas Powell, Mr. Andrew Clark, ex-members of the medical staff, the Rev. Dr. Morrison, rector of St. Marylebone, Mr. Ernest R. Debenham, the Mayor of St. Marylebone, Mr. James Boynton, M.P., Lieutenant-Colonel Hon. G. H. Windsor Clive, Dr. A. G. Auld, and Dr. Eric Pritchard. The long and useful history of the dispensary was strongly emphasised by Lord Howard de Walden, who remarked that in many ways dispensaries, such as the St. Marylebone General Dispensary, had claims on the public equal to those of the larger general hospitals, for they dealt with the prevention of disease or its treatment while it was still capable of cure, and in this connexion he referred to the invaluable work done by the dispensary in the treatment of tuberculous patients and in the prevention of infant mortality by the operations of the infant consultations carried on at the institution. The funds collected as the result of this special appeal amounted to over £1200.

GLASGOW UNIVERSITY CLUB OF LONDON.—Lord Curzon of Kedleston, Lord Rector of the University of Glasgow, presided at a dinner of this club at the Gaiety Restaurant, Strand, on Nov. 25th and proposed the toast, "The University and the Club." He said that the main source of pride to a Lord Rector was that during his term of office he felt he was brought into contact with an important section of the youth of the country and was able to learn something of the ideals and aspirations by which they were moved. They heard a good deal nowadays of the distinction between the old and new universities. There was no rivalry between them; they each gave a system of education which was necessarily different. The older universities of England could not cover the whole field, and those who spoke for them regarded with pleasure the creation of new universities. There was no such contrast and diversity of function in Scotland, however, where the four ancient universities held the field in an unassailed and impregnable position. The toast of "The Guests" was proposed by Sir Donald MacAlister and responded to by Lord Lamington and Mr. Harold Cox. Among those present were Canon Hensley Henson, Sir Thomas Barlow, Sir Henry Craik, Mr. G. L. Craik, Sir John Batty Tuke, Dr. D. N. Knox, Sir Charles Ball, Dr. George Heron, the Hon. N. C. Rothschild, Sir David McVail, Sir John Moore, and Sir Christopher Nixon.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

WEDNESDAY, NOV. 23RD.

THE Council resumed its sittings at its offices, 299, Oxford-street, W., Sir DONALD MACALISTER, the President, being in the chair.

Penal Cases.

The whole of the sitting was occupied with the hearing of penal cases.

The first charge against a practitioner was dismissed.

The second case to be considered was that of James Dalziel, registered as of Auckland, New Zealand, Lic. R. Coll. Phys. Edin. 1867, Lic. R. Fac. Phys. Surg. Glasg. 1867, who had been summoned to appear before the Council on the following charge, as formulated by the Council's solicitor:—

That you unlawfully used an instrument or other means with intent thereby to procure the miscarriage of one Jennie Barraclough, of which offence you were on August 14th, 1907, convicted at Auckland, New Zealand, and sentenced to four years' imprisonment. And that in relation thereto you have been guilty of infamous conduct in a professional respect.

Mr. DALZIEL did not appear, nor was he represented.

Mr. WINTERBOTHAM (the solicitor to the Council) said that this was not a case of conviction within the British Islands. The result was that the case had to be dealt with as one of infamous conduct in a professional respect. He handed in a certificate of conviction.

The PRESIDENT announced the decision of the Council as follows: The Council have judged James Dalziel to have been guilty of infamous conduct in a professional respect, and have directed the Registrar to erase from the Medical Register the name of James Dalziel.

The Council then considered the case of George Gray Wilson, registered as of 23, Duncan-terrace, Islington, N., Lic. R. Coll. Phys. Edin. 1898, Lic. R. Coll. Surg. Edin. 1898, Lic. Fac. Phys. Surg. Glasg. 1898, who had been summoned to appear before the Council on the followihg charge, as formulated by the Council's solicitor:—

That you abused your position as a medical man by committing adultery with a Mrs. Moore, with whom you stood in professional relationship, of which adultery you were found guilty by the decree of the Probate, Divorce, and Admiralty Division (Divorce) of the High Court of Justice, dated March 15th, 1910, in the case of Moore *v.* Moore and Wilson, in which you were the co-respondent. And that in relation thereto you have been guilty of infamous conduct in a professional respect.

Mr. Wilson appeared in person and was accompanied by Mr. E. W. Fordham, his counsel.

Mr. WINTERBOTHAM (the solicitor to the Council) briefly indicated the circumstances in which the charge came to be brought against Mr. Wilson. The case was brought to the notice of the Council through the proceedings in the Divorce Court, and the fact of the adultery after its decree could not be denied. The question with which the Council had to deal turned on whether there was the professional relationship of doctor and patient existing between the parties. Mr. Wilson had been employed as surgeon on board vessels of the P. and O. Company. He first met the lady and her husband on a voyage from Aden to Bombay, and he had been medical man on the vessel in which she had returned to England. He (Mr. Winterbotham) would contend —although this was disputed by Mr. Wilson—that he in his ordinary course of duty attended the lady, advised treatment, and supplied medicines. It was admitted that he had had her removed for a time to the hospital cabin which was under his control.

Dr. T. H. A. CHAPLIN, medical inspector of the P. and O. Company, who gave evidence, stated that the lady's name did not appear in the book of the medical man as having been ill. A surgeon in the service of the company was paid by it. He was not allowed to ask for a fee from passengers whom he attended. If anyone out of gratitude offered a surgeon a fee he was not prohibited from taking it.

The PRESIDENT asked whether there was anything in the regulations of the company to the effect that the medical man was to be regarded in a professional relation to all on board.

Dr. CHAPLIN: No. That is a point on which I would like to have a ruling.

Two other witnesses were heard in relation to the allegations on which the charge was based.

Mr. GEORGE GRAY WILSON gave evidence on his own behalf. He stated that he did not make arrangements that the lady would return in the same vessel as he. He never attended her or her husband in a professional way. There never had been any professional relationship between him and the lady at any time. She had been accommodated in the hospital cabin on account of the heat in her own cabin. He had not visited her there, and he emphatically denied that there had been improper relations whilst he was the ship's doctor.

Mrs. MOORE also gave evidence and denied that there had been the professional relationship of medical man and patient between her and Mr. Wilson.

Mr. FORDHAM then addressed the Council on behalf of Mr. Wilson and argued that the professional relationship did not exist. If the Council were to hold that every passenger and every member of the crew was a patient of the ship's medical man it would be a most dangerous precedent. The law regarded with great jealousy the relation between medical man and patient, particularly as regarded gifts. The rule was particularly stringent, because of the fear or presumption that there might be undue influence as between medical man and patient. If it was to be held that every member of a ship's company and every passenger was a patient of the ship's surgeon the presumption would have a very far-reaching effect. He would venture to submit that the rule could only be intended to apply to the actual cases where the ship's surgeon was in actual attendance on persons who were suffering from illness. A Christian Scientist, for example, might be on board ship and would object to call in the assistance of a ship's surgeon as against his belief. Could it be said that in such a case the relationship of medical man and patient would exist? He (Mr. Fordham) would submit that the relationship did not exist in this case. As a matter of fact, there was nothing to show that the lady was a patient of Mr. Wilson. Indeed, both of them denied it. In these circumstances he asked the Council to dismiss the charge against the accused practitioner.

The Council then adjourned.

THURSDAY, NOV. 24TH.

The Council resumed its sittings at its offices, 299, Oxford-street, W., Sir DONALD MACALISTER, the President, in the chair.

Penal Cases.

The Council considered in private the case of George Gray Wilson, which had been heard on the previous day.

The PRESIDENT, after the public had been readmitted, said: Mr. Wilson, the charge against you was:—

That you abused your position as a medical man by committing adultery with a Mrs. Moore, with whom you stood in professional relationship, of which adultery you were found guilty by the decree of the High Court of Justice in the case in which you were the co-respondent. I have to inform you that the Council have judged you to have been guilty of infamous conduct in a professional respect, and have directed the Registrar to erase from the Medical Register the name of George Gray Wilson.

The Council then took up the consideration (adjourned from May 27th, 1910) of the case of James Forrest, registered as of 60, Gordon Mansions, Gower-street, London, W.C., M.B., Bac. Surg. 1897, Univ. Edin., who had been summoned to appear before the Council on the following charge, as formulated by the Council's solicitor:—

That you have associated yourself as a member of its committee and also as one of its surgeons with an institution called the "Eye and Ear Clinique," and also the "National Eye Hospital," and the "National Eye, Ear, Nose, and Throat Hospital" of 123, Oxford-street, London, W., which advertises by pamphlets and in the public press for paying patients. And that in relation thereto you have been guilty of infamous conduct in a professional respect.

Dr. FORREST did not appear nor was he represented by solicitor or council.

The British Medical Association, who were the complainants, were represented by Mr. Cox, assistant secretary to the ethical committee, who was accompanied by Mr. Hempson, solicitor.

The PRESIDENT asked those members of the Council who were not present when the case was previously before the Council, and also those members who were also members of the British Medical Association, to retire from the hearing of the case.

This request was complied with by the members concerned.

Mr. BODKIN (the legal assessor) said that this case was before the Council on May 26th last. In May Dr. Forrest gave a considerable amount of evidence and answered questions put by the Council. In the course of these questions it was thought desirable that the books and the minute books of the "Eye and Ear Clinique" should be produced before the Council. Mr. Washington, the solicitor of Dr. Forrest, agreed to have an adjournment until the next day in order that he might bring forward some of the members of the committee of the institution in question and produce the books for the inspection of the Council. Accordingly, there was an adjournment until the afternoon of the following day. Mr. Washington said that he was not sure that he would be able to get his witnesses to the Council at that time. Before that time came Mr. Washington had ceased to act on behalf of Dr. Forrest. When the case came again before the Council Dr. Forrest did not attend, nor did anyone on his behalf. Then came the discussion as to what steps should be taken, and it was decided that the matter should stand over until the next session.

The SOLICITOR to the Council intimated that a letter, addressed to the General Medical Council, and dated Nov. 15th, had been received from Dr. Forrest as his defence to the charge. It was in the following terms:—

I enclose documentary testimony in proof of my statements made before you, at your last meeting, with regard to the administration of the Eye and Ear Clinique. As the case was concluded at the last meeting and judgment was postponed solely for the production of the above documents, I do not propose attending personally, but I beg leave to controvert certain statements made by the prosecution.

Their solicitor stated that no inquiries were made with regard to the financial position of the patients attending the Clinique. This is true; but we contend that such inquiries do not prevent abuse, and so offer no protection, for a patient who has determined to prostitute his sense of truthfulness to gain some slight monetary advantages will not be deterred by the inquisitorial methods adopted by many hospital authorities.

The plan in vogue at the Clinique was only resorted to after much deliberation, and consists in an exposition—by the nurse—to each patient of the objects of the institution, and particularly of the class to which it appeals.

With reference to T. W. Tyrell's account of his visit to the Clinique, I wish you to note that his description of the conversation he had with the nurse is both contradictory and incongruous. His statement that a copy of THE LANCET was lying on the table is a lie. It is unnecessary to refute in detail his narration of my conversation with him, as most of it is irrelevant to the case; but his departure from the truth is perhaps largely attributable to a desire to present a good case for his employer, who, I note, is the solicitor for the prosecution.

With regard to our advertisements to which exception has been taken, we only followed the precedents set by other institutions. I enclose an incomplete list of those which advertise either overtly or covertly for paying patients, and a perusal of their reports (which I also submit) shows that the money derived from the payments of patients is from 60 to 100 per cent. of the total income of the institution. As such notices have appeared regularly for years, the inference that the underlying principles were approved by the medical authorities appeared to us the only logical one, especially as the advertisements appear in those papers which appeal chiefly to the working classes. We inserted a public notice in the press once only, and then I am charged with infamous conduct in a professional sense; yet these other institutions are advertising regularly every week with impunity. These gross anomalies which are allowed to prevail with regard to public notices in the press have been largely created by the inactivity or tacit approval of the prosecuting body, who affect to protect the interests of the medical practitioner; and so strongly do I feel in relation to these irregularities that their continuance will compel me, from conscientious motives, to have my name voluntarily erased from the Register.

In conclusion I reiterate that if my conduct be infamous, then many other men on the staff of various London institutions ought to be arraigned before you on the same charge. JAS. FORREST.

The following statutory declaration was also read by the Solicitor:—

IN THE MATTER OF THE COMPLAINT AGAINST JAMES FORREST, M.B., F.R.C.S.E., OF THE EYE AND EAR CLINIQUE, LONDON.

Statutory Declaration by Alfred Ernest Yates, dated Nov. 15th, 1910.

I, ALFRED ERNEST YATES of 30, Brown-street, Manchester, do solemnly and sincerely declare as follows: I provided funds (without interest) for the foundation of the above institution, and furthermore guaranteed it against loss for a period of five years. The administration of the Clinique and the management of finances are under the control of an honorary committee, whose addresses are as follows:—

A. E. YATES (Engineer), 30, Brown-street, Manchester.
ELDON MITCHELL (Independent), South Shore, Blackpool.
F. WESTCOTT (Shipper), Thorners Chambers, London.
P. PHILLIPS (Tobacco Manufacturer), Metherall-gardens, W.
JAMES FORREST (Surgeon), 1, Duke-street, Manchester-square, London.
W. HARRISON (Stockbroker), Gresham House, E.C.

The late Dr. RAMMAGE was also a member.

Amongst the many resolutions passed by the committee the following two are germane to this case:—

1. That any excess of income over expenditure shall be devoted in the first place to the provision and full equipment of an in-patient department, and afterwards to the repayment of the donor.

2. That no salary be given to the surgeons for their services until the donor be reimbursed, and that such salary shall not exceed £100 per annum.

This small honorarium was not intended to represent an adequate remuneration for the surgeons' services, but given with the view of excluding purely honorary service.

This closed the case for Dr. Forrest.

The PRESIDENT announced the decision of the Council as follows: I have to announce that the Council have judged James Forrest to have been guilty of infamous conduct in a professional respect, and have directed the Registrar to erase from the Medical Register the name of James Forrest.

The Council took up consideration of the case of Herbert Llewellyn Porteous, registered as of Wickham Grange, Ohalford, Gloucestershire, Mem. R. Coll. Surg., Eng. 1898, Lic. R. Coll. Phys., Lond. 1898, who had been summoned to appear before the Council on the following charge, as formulated by the Council's solicitor:—

That you were on your plea of guilty convicted on June 21st, 1910, at the Gloucestershire Assizes before the Honourable Mr. Justice Lawrence, of certain misdemeanours, and were ordered to enter into your own recognisances in the sum of £10 to appear to receive judgment upon your said conviction if and when called upon so to do, such misdemeanours being contraventions of the provisions of the Lunacy Act, 1890: (*a*) in that you in December, 1909, and in January, 1910, whilst you were the medical attendant of two lunatic single patients named Evelyn Mary Whish and Irene Henrietta Anne Linthwaite, residing in the house of one Sarah Fisher, did contrary to Orders dated April 10th, 1907, made by the Lunacy Commissioners in respect to such patients under the Lunacy Act, 1890, and the rules made thereunder to the effect that such patients should be visited by you as such medical attendant once in every six weeks, and that you should make in the medical journals respectively relating to such patients entries relative to their condition at such visits, did make default in complying with such Orders; and (*b*) further in that you being the medical attendant of the said Evelyn Mary Whish and subject to the requirements of the said Order did unlawfully and knowingly on Dec. 24th, 1909, make in the medical journal relating to her a false entry implying that you had then visited her and had made the said entry as the result of your personal examination of her, contrary to Section 318 of the Lunacy Act, 1890; and (*c*) further in that you being the medical attendant of the said Evelyn Mary Whish and Irene Henrietta Anne Linthwaite, and subject to the requirements of the said Orders, did unlawfully and knowingly on Feb. 3rd, 1910, make certain false entries and certain wilful mis-statements of material facts in the medical statements relating respectively to the said patients, such false entries and mis-statements implying that you had on the said Feb. 3rd, 1910, seen and examined the said patients, whereas you had not then seen and examined the said patients, contrary to Sections 317 and 318 of the Lunacy Act, 1890; and (*d*) further in that you failed on Jan. 10th, 1910, to make a report as to the state of bodily and mental health of each of such patients to the said Commissioners. And that in relation thereto you have been guilty of infamous conduct in a professional respect.

Mr. Porteous appeared in person, and was accompanied by Mr. Hempson, solicitor.

Mr. WINTERBOTHAM made a statement to the Council concerning the particulars of the charge.

Dr. COUPLAND, a Commissioner in Lunacy, was called as a witness. He said that the reason why the Commissioners in Lunacy did not think it incumbent on them to bring the case under the notice of the Council was because although the breach of the law was grave and might have had serious consequences, Mr. Porteous had pleaded guilty and the circumstances under which the offence was committed showed that it was not done wilfully, but at the instigation of another. The conduct of Mr. Porteous showed that he did not realise his personal responsibility to the patients. However, the Commissioners thought that taking the circumstances into consideration it would be vindictive on their part to take the further step of reporting the case to the General Medical Council. At the same time the Commissioners hoped that the prosecution would have the effect of making all members of the medical profession recognise that their duties were of a most responsible nature.

Answering the President, Dr. COUPLAND said that there might be cases where the Commissioners themselves would think it incumbent to take a case before the Council.

Mr. PORTEOUS gave an assurance to the Council that in future he would do everything in his power to give no cause for complaint on professional grounds.

Mr. HEMPSON submitted to the Council testimonials from local members of the medical profession, and gentlemen of standing in the neighbourhood in which Mr. Porteous practises, testifying to the high regard and esteem in which he was held. Mr. Hempson went on to say that the facts in this case were beyond dispute. Mr. Porteous had not sought in any way to withhold from the Council the full facts of the case as known to him. Dr. Coupland had given unexpected testimony towards the defence in this case. He said that he would have considered it hard and harsh to have reported the matter in order that proceedings might have been put on foot. He (Mr. Hempson) would submit that it was a hard case. Mr. Porteous had not made a single penny out of what he did, and fortunately no harm was done by his errors. Mr. Justice Lawrance considered that the case showed errors of judgment rather than acts of design. He therefore permitted Mr. Porteous to be discharged with kindly words of admonition, and assuring him that if there was nothing against his conduct in the future he would hear nothing more in the future.

The PRESIDENT announced the decision of the Council as follows: Mr. Porteous: The Council has found the conviction alleged against you in the notice proved, but it has not decided to pronounce judgment on the conviction at this meeting, but you will be called upon to appear before it at the May session on a day of which notice will be given you, when you will be required to produce evidence as to your conduct in the interval.

The Council proceeded to the consideration (adjourned from May 27th, 1910), of the facts proved against Edward Joseph Regan in regard to whom the Dental Committee, at its meeting on Monday, Nov. 21st, 1910, drew up a supplementary report. In the course of the report it was stated that Mr. Regan had attended personally and presented as evidence his own oral statement, but produced nothing in support of it.

At the close of the proceedings on May 27th, 1910, the PRESIDENT, addressing Mr. Regan, said: "Mr. Regan: The Council have considered the facts proved in the report of the Dental Committee but have not proceeded to pronounce judgment in your case, and have postponed the further hearing of your case till the November session, when you will be required to produce evidence as to your conduct in the interval, with special reference to your having ceased all relations with unqualified practitioners and advertising."

The complainants were the British Dental Association, represented by Mr. R. W. Turner.

Mr. REGAN attended and addressed the Council on his own behalf. He said that he had done his best to remove the cause of complaint against him, and he wished, if his name was permitted to remain on the Register, to continue to obey the rulings of the Council.

The PRESIDENT announced the decision of the Council as follows: "Edward Joseph Regan: I have to announce that on the facts found in the report of the dental committee you have been judged to have been guilty of infamous or disgraceful conduct in a professional respect, and that the Registrar has been directed to erase from the Dentists Register the name of Edward Joseph Regan.

The Council then directed its attention to the case of Alexander Peel Patterson, in regard to which the Dental Committee had made a report. In that report it was stated that the committee found that the following facts were established by the evidence:—

The said Alexander Peel Paterson was registered in the Dentists Register on Oct. 14th, 1878, as "In practice before July 22nd, 1878." His address in the Register for the current year is 63, Bradshawgate, Bolton. The said A. P. Patterson admitted that the four persons mentioned in the notice of inquiry are in his employ and are all unqualified, but stated that he has given all of them notice and in future intends to employ no unqualified persons. He further stated that the circular complained of was issued by him and had been in use for about 14 years, that with this exception he has never advertised, that he had discontinued the circular, and he undertook not to advertise again. The said A. P. Patterson has employed collectors who have distributed the said circular at their discretion, and if any practice resulted it would be of advantage to the collectors. The said A. P. Patterson stated the particulars in which he considered his system of dentistry to be superior to others. The said A. P. Patterson never saw Mrs. Clarke. None of his unqualified assistants know the constituents of the eucaine used in the practice. Their instructions are to use it carefully, not to waste it, and not to exceed two syringefuls. They have no instructions as to examining the heart, and they are not capable of doing it.

Amongst the evidence before the committee were depositions of witnesses taken touching the death of one, Mary Ann Clarke.

Mr. Patterson attended and was accompanied by his counsel, Mr. Barrington Ward.

The British Dental Association were the complainants and were represented by Mr. W. R. Turner.

Mr. BARRINGTON WARD addressed the Council on behalf of Mr. Patterson and said that his client did not know what he was doing was wrong. Clarke's case was that of a woman who died after dental treatment. There was no undue injury present and the cause of death was apoplexy. His client gave a most solemn undertaking that he would not employ

any unqualified man so as to allow that unqualified person to take part in any dental operation.

The PRESIDENT in addressing Mr. Patterson said: I have to announce that on the facts found in the report of the Dental Committee it has been proved that Alexander Peel Patterson has been guilty of infamous or disgraceful conduct in a professional respect, and that the Registrar has been directed to erase from the Dentists Register the name of Alexander Peel Patterson.

Examinations for the Services.

The report by the Examination Committee on the returns as to examinations for the services received since the last session of the Council was received.

The Apothecaries' Hall, Dublin.

The reports by the Examination Committee on the Final Examinations of the Apothecaries' Hall, Dublin, held in July and October, 1910, were also received.

The Assistant Examiner to the Society of Apothecaries.

On the motion of Mr. NORTON it was agreed that the temporary appointment of Mr. V. Warren Low, F.R.C.S. Eng., as Assistant Examiner to the Society of Apothecaries of London during the illness of Mr. Collier, which was sanctioned by the Executive Committee, be extended till such time as Mr. Collier might be able to resume his duties.

An Admission to the Medical Register.

The Council agreed to adopt the recommendation of the English Branch Council that Mr. Lewis Fabien should be registered. Mr. Lewis Fabien, Mem. R. Coll. Surg. Eng. 1876, is a medical practitioner entitled to be registered under the Medical Act (1858), but who neglected to effect such registration until after the "appointed day" (June 30th, 1887) under the Medical Act (1886).

Mr. FABIEN in making his application for registration supplied a statutory declaration giving the reason why he omitted to register before the Medical Act (1886) came into force—viz., that immediately after qualifying he proceeded to the colony of Trinidad, where he joined the Government Medical Service, and where he had been in regular practice ever since.

The Anæsthetics Committee.

The report of the Anæsthetics Committee was received and entered on the minutes, but discussion of the recommendations of the committee was deferred until a convenient opportunity later in the session.

The Council adjourned.

FRIDAY, NOV. 25TH.

The Council resumed its sittings at its offices, 299, Oxford-street, W. Sir DONALD MACALISTER, the President, was again in the chair.

Charge against Medical Man Dismissed.

The Council took up consideration of the case of William Peart-Thomas, registered as of 21, Portman-street, London, W., M.B., Mast. Surg. 1891, M.D. 1898, Univ. Edin., who had been summoned to appear before the Council on the following charge, as formulated by the Council's solicitor:—

That you have by your presence, countenance, advice, assistance, or cooperation, knowingly enabled an unqualified and unregistered person—namely, one Andrew Miller—to attend and treat patients as if he were duly qualified and registered. And that you have by your presence and cooperation with the said Andrew Miller, whom you knew to be an unqualified and unregistered person, during the course of his treatment of certain patients, enabled the said Andrew Miller to attend and treat such patients under such circumstances, and with the intention that in the event of the death of any of such patients, you should be in a position to give certificates of death in respect of them as if you were the medical practitioner who had been really in responsible attendance upon them. And that in relation thereto you have been guilty of infamous conduct in a professional respect.

The complainant was Dr. Hugh Woods, acting on behalf of the London and Counties Medical Protection Society.

Dr. Peart-Thomas appeared, and was accompanied by his counsel, Mr. R. W. Turner.

Dr. WOODS explained to the Council the grounds on which the complaint was made. He said that in August, 1909, the Duke of Manchester became interested in the mode of treatment by one Andrew Miller, a man without medical qualification and registration, who professed to cure the disease of phthisis. In September, 1909, Mr. Miller came to this country to demonstrate his treatment under the auspices of the duke. To this end Miss Dempster, a hospital nurse with a nursing home in Upper Montagu-street, was approached with a view to her allowing some patients to undergo treatment by Mr. Miller there. This lady refused to allow this unless a properly qualified medical man was in charge. Dr. Peart-Thomas ultimately agreed to take charge. His duty, it was alleged, was to stop the treatment if dangerous symptoms supervened, and it was further alleged that in the event of the death of any of the patients he would be in a position to give a death certificate. It was contended that the action of Dr. Peart-Thomas in regard to this matter laid him open to the charge now made against him. Dr. Woods proceeded to read extracts from notes of evidence given in the county court with regard to the claim of Dr. Peart-Thomas for professional fees.

Mr. TURNER objected to the reading of these notes on the ground that they were neither official nor were they full and accurate.

The PRESIDENT said that the Council would keep in mind the character of the notes, and would only accept them subject to correction.

The Duke of Manchester was called as a witness.

Sir CHARLES BOXALL, his solicitor, stated that the duke did not wish to take any part in advancing the charge. He was quite prepared to assist the inquiry, but he was not a party to any attack on Dr. Peart-Thomas.

The Duke of MANCHESTER, in the course of his evidence, stated that so far as he was concerned in this matter he considered that everything was being done under medical supervision from the fact that a very highly respected committee of medical men had been taking a scientific interest in the matter. All that he had got Mr. Miller to come to this country for was to get his treatment tested by thoroughly scientific methods. When Dr. Peart-Thomas was brought in the contingency of his having to give a death certificate was far from his (the duke's) mind. He could not say if the matter was even mentioned. He understood that Dr. Peart-Thomas was to see that nothing dangerous took place, and to stop the experiments if anything like death was likely.

Dr. WOODS: Did he interfere with Mr. Miller's treatment.

The Duke of MANCHESTER: I am not quite sure.

Cross-examined by Mr. TURNER, witness said that he got a committee of English medical men to interest themselves in the treatment. They knew the nature of the drug. His idea was that Dr. Peart-Thomas should be a check, if necessary, against any dangerous treatment.

This closed the case for the complainants.

Dr. A. C. LATHAM was then called as a witness by Mr. Turner. He said that the duke came to him in September, 1909, and told him that Mr. Miller's treatment had been successful in cases of consumption. He also mentioned his desire to have it tested. Mr. Miller was prepared to tell what the treatment was, and if he was successful he would take care that every medical man should have the use of it. He told the duke that the best way to test the treatment was to go to the Brompton Hospital and ask those in authority there to do it. Mr. Miller objected because his nurse would not be admitted to the hospital. Dr. Latham told the duke that he and other medical men were prepared to investigate any cases brought to them. They would see their condition before and after treatment and would report to the duke. He (Dr. Latham) said that it was necessary that there should be a medical man in attendance, and he told Miss Dempster not to take the cases in until she had an assurance that there would be a medical man in attendance.

Mr. TURNER: So far as you know, was Dr. Peart-Thomas taking charge of these cases?

Dr. LATHAM: I was under the impression that Dr. Peart-Thomas was in charge of the cases as if he were a house surgeon in charge of them in a hospital.

In answer to the PRESIDENT, witness said that at the end of the treatment a report was presented to the Duke of Manchester. In the opinion of those medical men who made the report there was no evidence to encourage a more extended trial of the treatment.

Mr. F. F. BURGHARD spoke as a witness to Dr. Peart-Thomas's professional and private character.

Dr. PEART-THOMAS gave evidence on his own behalf. When he came to an arrangement with the Duke there was nothing said about death certificates. He knew the drug and the amount of the injection employed in the treatment. A nurse gave the injection. He had control of the patients. He was sent for on the temperature of one of them rising.

He approved of the regulation of their diet. So far as he could remember, the injections were used for four or five days, and in the case of one patient there was a second treatment. It would not harm the patient.

Mr. TURNER: Exercising your skill and judgment as a professional medical man, you permitted that to be done?

Dr. PEART-THOMAS: I did.

Did you exercise your judgment as a professional man before the injection was given?—I did.

Did you in any way submit to the directions of Mr. Miller in regard to this treatment?—No. Mr. Miller told me the drug and the former doses in America or somewhere. These patients were in a fit state to receive it. The drug was given by my orders by the nurse.

Is the suggestion true that you were "covering" Miller and enabling him to carry on a course of treatment?—There is no truth at all in that suggestion.

Dr. WOODS: Did you think the treatment detrimental to the patient?

Dr. PEART-THOMAS: No.

Do you now think it did good?—No; I do not think it did good.

Do you think it ineffective?—I think it was, after five or six weeks' watching.

What position did Mr. Miller occupy?—He was in the position of a nurse. He never examined the patients.

Were you in a position to prohibit the use of the drug?—I was in such a position. I was in charge of the cases in exactly the same way as a house surgeon.

Was Miller competent to prescribe?—I know nothing about Miller except I believe he is a doctor of dentistry. I know nothing of his capabilities.

Re-examined, witness regarded himself as medical practitioner in charge of cases.

Miss M. C. DEMPSTER, the head of the nursing home, gave evidence to the effect that Dr. Peart-Thomas was in full and complete charge of the patients.

Mr. TURNER addressed the Council on behalf of Dr. Peart-Thomas. He contended that there was not a shred of evidence of "covering" in any shape or form. Not a word could be said against the professional conduct of his client.

The PRESIDENT announced the decision of the Council as follows: Dr. William Peart-Thomas: I have to inform you that the decision of the Council is as follows: "That the facts alleged against William Peart-Thomas have not been proved to the satisfaction of the Council."

The Council adjourned.

SATURDAY, NOV. 26TH.

The Council resumed its sittings at its offices, 299, Oxford-street, W. Sir DONALD MACALISTER, the President, was again in the chair.

Report of the Pharmacopœia Committee.

On the motion of Dr. NORMAN MOORE, seconded by Sir JOHN MOORE, the report of the Pharmacopœia Committee was adopted.

The report was in the following terms:—

From May 23rd, 1910, to Nov. 19th, 1910, the number of copies of the British Pharmacopœia (1898) sold by the publishers was 545. The total number of copies sold in the year beginning Nov. 22nd, 1909, was 1094. The annual sale thus continues to be steady. Up to the present time 42 460 copies of the Pharmacopœia, and 4491 copies of the Indian and Colonial Addendum have been sold. The stock now in hand consists of 570 copies of the Pharmacopœia, together with 1843 copies of the Addendum. It will be necessary to print a fresh impression of the Pharmacopœia to meet the demands of the year now beginning, and the Committee recommend that the President be authorised to give orders for the work so soon as the publishers report that the present stock is approaching exhaustion.

The Committee appointed its secretary, Dr. Tirard, to take part, along with delegates sent by the British Government, in an International Conference held in Paris in June last. The purpose of the Conference was to discuss proposals for an international understanding on the subject of methods and standards of analysis in relation to food and drugs. Certain resolutions were arrived at, which are given in the report of Dr. Tirard hereto appended. These may have an important bearing on the analytical portions of the Pharmacopœia, and the Committee propose to give them due consideration in relation to the revision of the 1898 issue on which they are now engaged.

Meanwhile the thanks of the Council are due to Dr. Tirard for the valuable service he has thus rendered.

The PRESIDENT remarked that the approval of the report meant that the Council thanked Dr. Tirard for his services at the International Conference. It also meant that he (the President) was empowered to order more copies of the Pharmacopœia.

Students' Registration Committee.

A report was received from the Students' Registration Committee.

Public Health Committee.

Sir JOHN MOORE, in presenting the report of the Public Health Committee, said that the committee recommended that the applications of the University of Bristol, the National University of Ireland, and Queen's University of Belfast that their Diplomas in Public Health should be recognised for registration, should be acceded to. He mentioned that the application from the University of Wales, seeking recognition of the Diploma in Public Health issued by the University under its chartered powers, was considered by the committee. The consideration of this application was postponed, as the University had not yet obtained registrable powers for its degrees and diplomas under Act of Parliament. Sir John Moore moved:—

That the Diplomas in Public Health of the University of Bristol, the National University of Ireland, and the Queen's University, Belfast, be recognised for registration as additional diplomas.

Dr. NORMAN MOORE seconded.

The motion was agreed to.

On the motion of Sir JOHN MOORE it was also agreed—

That the legal bearings of a proposed amendment of the rules for the Diplomas in Public Health requiring registration, as well as the possession of a registrable qualification as a condition of admission to the examinations for these diplomas, be referred to the legal advisers of the Council for consideration and report.

The Anæsthetics Committee.

The report of the Anæsthetics Committee was considered. The committee had had before it a communication from the Privy Council addressed to the Registrar by Sir Almeric Fitzroy. Sir Almeric Fitzroy wrote:—

With reference to previous correspondence as to proposed legislation on the subject of anæsthetics I am directed by the Lord President of the Council to transmit to you a Memorandum and Draft Bill which have been submitted to the Home Secretary by Dr. Frederic Hewitt, M.V.O., and to ask you to be good enough to move the General Medical Council to favour his lordship with their observations thereon. I am to point out that the Draft Bill does not indicate the drugs or substances producing a state of unconsciousness which a dentist may be permitted to use.

The memorandum discussed at length various points which had arisen on the question of the administration of anæsthetics. The following was suggested as "a rough draft" of an anæsthetics Bill:—

1. Any person other than a legally qualified medical practitioner registered under the Medical Acts who shall administer or cause to be administered to any other person by inhalation or otherwise any drug or substance, whether solid, liquid, vaporous, or gaseous, and whether pure or mixed with any other drug or substance, with the object of producing a state of unconsciousness during any surgical, medical, obstetrical or dental operation, examination, act or procedure, or during childbirth, shall be liable on conviction before a court of summary jurisdiction for such offence to a penalty not exceeding £10, and in the case of a second or subsequent conviction to a penalty not exceeding £20; provided always that a person shall not be liable to a penalty under this section if in conducting such administration he was acting under the immediate direction and supervision of a legally qualified medical practitioner, or if, having been registered under the Dentists Act, 1878, he conducted such administration for a dental operation, act, or procedure, with one or more of the drugs or substances specified in the schedule hereto affixed, or if the circumstances attending the administration were such that he had reasonable grounds for believing and did believe that the delay which would have arisen in obtaining the services of a legally qualified medical practitioner would have endangered life.

2. Any person other than a legally qualified medical practitioner registered under the Medical Acts who shall inject, insert, or otherwise introduce, or shall cause to be injected, inserted, or otherwise introduced into any part, cavity, organ, or tissue of any other person through any puncture, incision, or other breach of cutaneous, mucous, or other surface for that purpose made or produced, any drug, medicament, or substance, whether solid, liquid, vaporous, or gaseous, and whether pure or mixed with any other drug, medicament, or substance, with the object of producing a state of insensibility to pain without unconsciousness, during any surgical, medical, obstetrical, or dental operation, examination, act, or procedure, or during childbirth, shall be liable on conviction before a court of summary jurisdiction for such offence to a penalty not exceeding £10, and in the case of a second or subsequent conviction to a penalty not exceeding £20, provided always that a person shall not be liable to a penalty under this section if in attempting to produce or in producing such insensibility to pain without unconsciousness he was acting under the immediate direction and supervision of a legally qualified medical practitioner, or if, having been registered under the Dentists Act, 1878, he attempted to produce or did produce such insensibility to pain without unconsciousness for the performance of a dental operation, examination, act, or procedure, or if, acting under the immediate direction and supervision of a person registered under the Dentists Act, 1878, he attempted to produce, or did produce, such insensibility to pain without unconsciousness for the performance of a dental operation, examination, act, or procedure.

3. The expression "court of summary jurisdiction" in this Act shall have the same meaning as in Subsection 11 of Section 13 of the Interpretation Act, 1889. In Scotland it shall mean any justice of the

peace and also the sheriff. The expression "the Medical Acts" shall mean the Medical Act, 1858, and any Acts amending the same passed before the passing of this Act.

4. This Act may be cited as the "Anæsthetics Act."

No filled-up schedule was attached to the draft.

The Anæsthetics Committee recommended that the Council should communicate to the Lord President the following observations on the draft Bill:—

1. That, without committing itself to an opinion on mere points of drafting, the Council recognises that the Bill as submitted gives practical effect to the Council's conclusions on the subject, which have already been communicated to the Lord President.

2. That in Clause 1 it is desirable that a provision should be introduced making it clear that a person registered under the Dentists Act, 1878, is not prohibited from administering for a legally qualified medical practitioner one or more of the scheduled anæsthetics in connexion with an operation, act, or procedure other than dental conducted by such medical practitioner.

3. That in Clause 2 it is desirable that provision should be made for prohibiting the application or administration by unqualified persons of dangerous anæsthetic drugs to unbroken surfaces in connexion with dental or other operations, acts, or procedures; and that with this object the limiting words, "through any puncture, incision, or other breach of cutaneous, mucous, or other surface for that purpose made or produced," might with advantage be omitted.

4. That in Clauses 1 and 3 it may be desirable to provide explicitly for an appeal to a court of quarter sessions or other corresponding court against a conviction made under the Act by a court of summary jurisdiction.

5. That, in the opinion of the Council, it is of importance that, for the protection of the public against the dangers disclosed in the Report of the Departmental Committee appointed by the Secretary of State, legislation on the lines of the Bill submitted should speedily receive the sanction of Parliament.

6. That, in case it is decided to bring such a Bill before Parliament, the Council would be prepared to suggest the terms of the necessary schedule, including therein in the first instance *nitrous oxide gas*.

Sir HENRY MORRIS formally moved that the report should be adopted.

Dr. KNOX seconded.

Sir THOMAS FRASER said that whilst he entirely sympathised with the purport of the Bill, he thought there was some ambiguity in the second clause. Did it entitle a nurse, who was under the direction of a medical man, to make an injection whilst she was not actually under his immediate supervision?

The PRESIDENT said that points of drafting hardly concerned the Council at this stage, because it had no assurance that the exact text now submitted would ever come before Parliament. The Bill would have to be submitted to draftsmen and to the law officers of the Crown. He had the assurance of the Government that when the Bill was redrafted it would come before the General Medical Council. Therefore it was better that members should reserve their criticisms on points of detail until that stage. This draft was a preliminary sketch and the Council had been asked whether it was on the right lines. He had no doubt that the point raised by Sir Thomas Fraser would have to be considered.

The motion was agreed to.

Instruction in Professional Ethics.

Dr. LATIMER moved:—

That the Council should recommend to the several licensing bodies the addition to the latter part of the curriculum of some instruction in professional ethics, and that this recommendation should also apply to the dental curriculum.

He said that owing to the cessation of the old method of admission into the medical profession by way of pupilage to a medical practitioner one opportunity was lost to the medical student to come under the instruction and guidance of an elderly and experienced practitioner. Eloquent testimony had been borne at various times to the efficacy of this practice in regard to professional ethics. He had often heard the view expressed in medical circles that it would be a great advantage to the medical student that he should have some instruction in ethics. Many cases which came before the Council and also many cases which individual members came across in the large towns convinced him that there were medical men who departed from the code of medical ethics, because they were uninstructed in it. He did not propose that anything should be done more than to request the licensing bodies that a student should have one or two lectures delivered to him on the subject. The greatest advantage would accrue to young men if before leaving college they learned the pitfalls which they might meet with in their after career. There was an honourable professional code in the medical profession. He had seen it departed from. He had seen medical men fighting for an appointment as if they were engaged in a political battle. They canvassed workmen for their votes, and he believed that if the matter had been brought before the Council it would have taken a very severe view of the conduct. It was not an examination which he wished to institute in this matter: it was something in the nature of a kindly lecture. Medical students about to take their place in the ranks of the profession should learn the true relationship of principal and assistant and the relationship of medical man to patient. Guidance was also required in regard to such matters as advertising and the question of certification. Several members of the Council to whom he had spoken thought it desirable that the matter should be dealt with in a post-graduate course. He was not at all sure that that was the wisest plan. He hoped that the motion would be regarded as a suitable one.

Dr. LANGLEY BROWNE seconded. He considered that it would be extremely useful that the student should know before the end of his career the pitfalls which he should avoid and the courtesies which he should carry out when he went into practice.

Dr. NORMAN MOORE remarked that he was sure that all members of the Council sympathised with Dr. Latimer's aim that all students and practitioners in medicine should be guided by a proper code of morals. He differed from Dr. Latimer as to the means suggested—namely, of having a course of lectures in the medical schools. The authority of any course of lectures on the subject would depend upon the person who delivered them. That was a very important point. Let members of the Council look at medical etiquette and the conduct of practitioners from one end to the other. Was there anything more in the matter than that medical men should behave according to the ordinary precepts of morals and as gentlemen? He did not think there was more in it than that. It was desirable in the highest degree that all teachers of medical students should by their example do all that they could to encourage in the students rectitude of conduct. It would not be an advantage to have such lectures. The ordinary code of morals and the behaviour of a gentleman was what was required from a practitioner.

Sir CLIFFORD ALLBUTT considered that it was of high importance that these questions of conduct should be brought before medical students. It was very good for them to know how these principles could be applied.

Dr. SAUNDBY remarked that he had long held the opinions which had been expressed by Dr. Latimer. In the University of Birmingham some years ago he gave three or four lectures on the subject of professional ethics. These lectures were largely attended by practitioners, but the students did not come to them. They failed to reach the men whom he wanted to reach. After delivering these lectures for three years he stopped them, but afterwards published them in a book. If such lectures were to do good they must be made compulsory. If the student thought that it was a subject in which he was not to be examined he would neglect it.

Mr. TOMES said that the objection to Dr. Latimer's motion was that it would let the idea go out that there was a special system of ethics for the medical profession which was not applicable to other people. The principles of ethics might be laid down in lectures, but nobody had difficulty about the principles. The application of the principles could not be anticipated by lecture, and therefore the difficulties in practice could not be anticipated.

Dr. SAUNDBY observed that when he lectured on the subject he dealt with actual cases which had arisen, classifying them under different heads.

Sir CLIFFORD ALLBUTT pointed out that on admission to the Fellowships of the Colleges an imposing document concerning professional conduct was read out, and to its terms the candidate gave his pledge.

Dr. NORMAN WALKER said that he did not find students in Edinburgh quite so careless about these questions concerning professional conduct as they seemed to have been in Birmingham. He found that the views of the students in Edinburgh were often critical of the General Medical Council. They thought that the Council's rulings were extremely severe. The reason of this was that the reports of its proceedings in the ordinary newspapers conveyed an idea of severity which he did not think was justified. He did not see why the teacher of medical jurisprudence might not add one or two lectures on the subject of professional conduct to his students, who would be senior men.

Dr. MANN thought it advisable that teachers in their lectures should let students know that they would be very glad to give advice on this subject, and should encourage them to communicate with them, either personally or by letter. That was his practice.

Sir THOMAS MYLES thought that steps should be taken to advise young medical men of their responsibilities, but any attempt to teach a hard-and-fast system would be open to the objection that when an emergency arose outside the scope of their instruction they would not know how to apply the code.

Dr. LATIMER briefly replied to the discussion.

Sir D. C. MCVAIL thought that Dr. Latimer had done great service in bringing the subject forward, but suggested that he should rest satisfied with the line the discussion had taken and not press his motion to a division.

Dr. LATIMER: In response to that appeal I shall not press the motion.

The motion was by leave withdrawn.

Unqualified Practice Prevention Committee.

On the motion of Dr. LANGLEY BROWNE an interim report was received from the Unqualified Practice Prevention Committee. It was in the following terms:—

The report as to the practice of medicine and surgery by unqualified persons in the United Kingdom, presented to both Houses of Parliament by command of His Majesty, was received by the committee. It was resolved that the report should be fully considered at a future meeting of the committee, and that the committee should report thereon to the next meeting of Council.

The Medical Curriculum and the Preliminary Examination.

Dr. MACKAY presented a report from the Education Committee upon a resolution remitted to it by the Council regarding the curriculum and upon the preliminary examination in general education. The resolution, which was passed on Nov. 26th, 1909, was in the following terms:—

That it be referred to the Education Committee to consider further the place in the student's career which the preliminary sciences should occupy; and that the committee be requested to frame and submit to the Council a pattern scheme of medical education whereby the required minimum of the several subjects to be included in the curriculum can be adequately studied and the requisite examinations thereon passed within the period prescribed by the curriculum.

Dr. Mackay said, in explaining the terms of the report which the committee had brought up on this resolution, that only in regard to the preliminary examination did the committee bring forward a recommendation which would require the sanction of the Council to be made effective. In regard to the question of the preliminary sciences, the Education Committee after an analysis of statistics had come to the conclusion that the energies of the great majority of the schools of the country ought for some time to be entirely absorbed in raising the standard of the general education of their pupils to the position which it ought to occupy. As was shown by the report, the committee had been enabled to furnish the Council with statistics as to the number of the candidates who had sat the first professional examination of the Conjoint Board of England on the strength of a school curriculum alone. The secondary schools which the Board recognised numbered 49 in all, and, as they had been specially inspected with a view to ascertaining that they were adequately equipped for the work, they might be regarded as specimens of the best of their class. The Conjoint Board had recognised instruction in the preliminary sciences in institutions other than universities and medical schools for a period of 16 or 17 years. A very small proportion of students had received instruction in this manner. The committee had been forced to the conclusion that as this very small proportion came from the best schools of the country it was practically impossible to expect that the ordinary secondary schools could at the present time take up the work. The figures which had been received by the committee showed that only a very few, and these apparently of exceptional ability, coming from the best schools in the country, were prepared to undertake the first professional examination upon a course of school study; and they confirmed the view of the committee that the schools of the country generally were not at the present time in a position to take up the work. The committee were of opinion that the question contained in the proposal to delegate indiscriminately to the school curriculum the subjects of the first professional examination was one which was not ripe for the consideration of the Council. It might be said that the Council ought to recognise the schools which the Conjoint Board had already recognised. If the Council would but enter into this matter a very long and difficult discussion would be the result. If it began the recognition of schools, the incline was so steep that the claims of all secondary schools putting forward candidates could not be resisted, and the result would be that the standard of examination in the preliminary sciences would be lowered beyond any possibility of retrieval. The second point referred to the committee was the suggestion that a pattern curriculum should be established. The committee came to the conclusion that it could not draw up a curriculum under which the required minimum of the several subjects to be included could be adequately studied, and the required examinations thereon passed by the average student within the period prescribed by the curriculum. The period of five years was to be regarded as the minimum of time to be allotted to the course of study, and it was not unnatural that only the best or the most favourably situated of the candidates found it sufficient. He would point out that it would be a very difficult matter for the Education Committee to draw up a pattern curriculum. Let the members of the Council look over the curricula of the different licensing bodies. They would not find one amongst them which was not a satisfactory curriculum. They differed from each other in different ways. If the Council were to determine upon a pattern curriculum, that curriculum must be a minimum one. He did not think there was a single existing curriculum that could be called a minimum curriculum. One was perhaps comparatively weak in one point, but strong in another. If a pattern curriculum was established, it must be a mimimum curriculum in each individual subject. In his opinion it would be a retrograde step if one were to be drawn up. The third subject which had been under the consideration of the committee was the preliminary examination in general education. He quoted at length from the report of the committee on the considerations which had weighed with it and the conclusions which it had reached. He referred to the improvement of education conditions in England and Scotland. The committee had come to the conclusion in regard to the examinations now recognised as preliminary examinations for medical study, that the elimination of those examinations which are most distinctly "junior" in type would not have the effect of diminishing to any considerable extent the number of the candidates entering the profession or of compelling examiners to a laxity in marking which would tend to lower the level of the higher examinations. On the other hand, the evidence seemed to point to the conclusion that the removal of these examinations from the preliminary list, if sufficient time were given to allow the change to be accomplished gradually, would be fully met by the improvement in the educational conditions of the country which was now taking place and was sure to extend. The change would certainly be welcomed by the schools as an educational advantage, as it would tend to prevent the premature withdrawal of the bright youth from his school career at an age when the crowning part of the work remained to be done. The committee brought forward a recommendation to give effect to their views. It was not proposed that it should apply to dentists. In conclusion Dr. Mackay moved the adoption by the Council of the recommendation of the committee, which was in the following terms:—

That on and after the close of the year 1913 the following examinations be removed from the list of the preliminary examinations recognised by the Council as qualifying for entrance on the curriculum in medicine: The Junior Local Examination of the University of Oxford; the Junior Local Examination of the University of Cambridge; the College of Preceptors Preliminary Examination for Medical Students; the Educational Institute of Scotland Preliminary Examination; the Royal College of Physicians and Surgeons of Ireland Preliminary Examination; the Intermediate Education Board of Ireland Middle Grade Examination.

Dr. NORMAN MOORE seconded.

Sir HENRY MORRIS said that in regard to the preliminary sciences and the pattern curriculum the report left things as they were. The reply of the committee was that it could not do as it was asked, and the only reason given for its inability to do so was the very remarkable one that only exceptional candidates could accomplish, within the allotted time, the study of the full number and amount of the subjects contained within the present curriculum. It was with the object that the committee should consider and report to the Council how this very condition of over-congestion of the curriculum might be obviated that the resolution of Nov. 26th,

1909, was referred to it. There were two ways in which the congested curriculum could be relieved—namely, (1) either by lightening the curriculum, or (2) by extending the period. The report did not deal with either alternative. It left things exactly as they were. It had made no attempt whatever to adapt the quantity of the contents to the containing space, and the only reason given for its not doing so was that the contents were greater than the space could contain. The committee was not asked to draw up a pattern curriculum which would prove acceptable to the majority of the licensing bodies and which would remove the diversity of detail among the curricula. It was not asked even to draw up a pattern curriculum. What it was asked to do was to draw up a pattern curriculum whereby the required minimum of the subjects included could be adequately and successfully studied within the period prescribed by the curriculum by the average student. The members of the Council knew how improbable it was that any pattern scheme would be accepted by all the licensing bodies, or that diversity of detail among the curricula could be prevented. Diversity of detail in a possible curriculum would be no bad thing. What was the mischief was, that the present curriculum was impossible to the average student. That was the darkness into which the Council asked the committee to throw the light. But the result of its report was that the students and their parents were left uninformed by the Council of the fact that a nominal five years' curriculum must in reality be one of six and a half or seven years; and the parent who launched his son as a medical student and expected to see him through on the expenditure of from £800 to £1000, had, by bitter experience, to realise that it was only after an additional year and a half or two years of time, and an additional £200 or £400 in cash, that the qualification which he and his son had in view could be attained.

The first part of the resolution of Nov. 26th, 1909, was "that it be referred to the Education Committee to consider the place in the student's career which the preliminary sciences should occupy." The reference was not as to the place in the curriculum, but as to the period of the student's career, which the preliminary sciences should occupy—as to whether they should be studied within the period of the curriculum, or previously. The answer of the committee might have been simple and direct, to the effect that the precise period should remain, as in fact it was now, optional; but that if previous to registering, but after passing an examination in general education, the curriculum should be correspondingly shortened by 6 or 12 months. Or its reply might have been that the period should be before the commencement of the curriculum, and that the curriculum, unburdened of the preliminary sciences, should remain at five years. The reply of the committee implied an untruth—of course, quite unintentionally, but still an untruth—that the preliminary sciences must be studied in the five years and in medical schools or in scientific institutions. The wish was father to the thought, and the thought to the implication. The reasons given for this reply are two: (1) that to transfer the subjects from the curriculum, and make them part of the course of school education, would be to remove them from any effective control on the part of the medical authorities; and (2) that the indiscriminate delegation of these subjects to the school curriculum was a matter which was not ripe for the consideration of the Council. The answer to the first was, that if the preliminary science subjects were made part of the school course, the examination in them would be under the same kind and extent of influence as the subjects and standard of the examination in general education. The answer to the second was given by Huxley in 1889, as well as by the teachers, and by the writers of an important document 20 years ago. Now these subjects, as long as they are retained in the curriculum, either ought to be exclusively studied in a medical school and taught by teachers in touch with the whole course of medical education, or their study elsewhere than at a medical school under specified conditions ought to be recognised. The question might be set aside of their being taught by men in general touch with the medical curriculum as a whole, because whether taught in a medical school or not they were taught by teachers who regarded the study of these subjects as the first steps in a science education, and who very little considered their special bearing on other parts of the medical curriculum; whereas the study of organic chemistry in its bearing on physiology and pathology was provided for within the limits of the professional curriculum. But if the study of these subjects was not to be of necessity within a medical school, then on what code of justice was the study of them in a highly equipped secondary school to be prohibited? Why are schools like Epsom, Dulwich, Bedford, St. Paul's, University College School Frognal Hampstead, to be prohibited, whilst polytechnic institutions and municipal technical schools, and several others mentioned on p. 13 of the Students' Regulations of the General Medical Council are recognised?

The report gave two statistical tables and stated that these tables showed that only a very few boys, and those apparently of exceptional ability, were prepared to undertake the first professional examination upon a school study. This was an incorrect and a misleading assumption for three reasons. In the first place, amongst the boys who pass the preliminary scientific (first professional examination) of the University of London as external students are a considerable number from secondary schools, many of whom come for examination in the advanced subjects to the Conjoint Board, and thus are not returned in the tables as coming from secondary schools, though it had been from secondary schools that they presented themselves for examination at the University of London. In the second place, at least half of the Conjoint Board candidates are University graduates or undergraduates, and are therefore exempt from examination in the preliminary sciences at the Conjoint Board. In the third place, there are many who had done a part of their preliminary science studies at secondary schools and the rest in a medical school and are tabulated as having come from the latter. But in so far as the number of candidates from secondary schools, with highly equipped modern sides—with excellent laboratories and highly qualified teachers—were fewer than might be expected, one cause was the misleading and inaccurate, "so-called," regulation No. 12 on p. 14 of the Council's publication, "Registration of Medical Students," and which the Report left without reference, untouched and uncorrected. This regulation was not only misleading and inaccurate—it was directly contrary to the facts. By that clause the Council was made to appear as usurping a power which belonged to the licensing bodies alone, and sometimes the Council was put into a very ridiculous position thereby. The General Medical Council could not refuse to place a man on the Register if he had passed his examination in general education and in preliminary science from school and graduated M.B. Lond. four years after registration. As long as Regulation 12 remained amongst the regulations of the Council an injustice was done to the boys, to the parents and to the secondary schools. In conclusion, he said that he was prepared to move the following motion:—

That as the Education Committee in their report of Nov. 22nd, 1910, express views in favour of retaining the preliminary sciences (chemistry, physics, and biology) as subjects of the medical curriculum, it be referred to the committee to consider and report to the Council as to the best way of amending the regulations of the General Medical Council in regard to the registration of medical students with the objects (1) of making those regulations consistent with the report and with the powers of the Council; (2) of making clear the distinction between regulations which must be observed and recommendations made for the students' guidance; and (3) of the advisability of altering or deleting Regulation 12 on page 14 of the regulations printed under date June 1st, 1910.

The PRESIDENT said that the motion of Sir Henry Morris really related to a different subject than that raised by Dr. Mackay's motion, which concerned the preliminary examination alone. Sir Henry Morris might, however, bring it forward as bearing on the first and second parts of the report after Dr. Mackay's motion, which dealt only with the third part, was disposed of.

Mr. THOMSON remarked that the Council might take some further expert advice on the value of these junior examinations.

Sir CHARLES BALL moved as an addition to Dr. Mackay's motion:—

That the Education Committee be authorised, on behalf of the Council, to communicate with the Commissioners of Intermediate Education in Ireland as to the possibility of establishing a satisfactory preliminary examination in education under the control of the Commissioners suitable for students commencing the study of medicine.

Such a substitute, he said, was absolutely necessary in Ireland. There was nothing in Ireland comparable to the leaving certificate. This addition was agreed to.

Sir C. NIXON seconded.

Dr. MACKAY accepted the amendment.

Dr. MACKAY's motion as extended by Sir Charles Ball's amendment was agreed to.

Sir HENRY MORRIS then formally moved the motion, the terms of which he intimated at the conclusion of his speech.

Dr. LANGLEY BROWN seconded.

It was unanimously agreed to defer further consideration on the motion until the next session of the Council in May, 1911.

Instruction in Scientific Subjects.

On the motion of Dr. MACKAY a report in the following terms was received from the Education Committee:—

On May 28th, 1910, the Council received a memorial relating to the position of the purely scientific subjects of chemistry, physics, botany, and zoology in the medical curriculum, which, on the motion of Dr. Saundby, was referred to the Education Committee for its consideration.

The subject to which the memorial refers having been dealt with specially in the report of the committee, further comment appears to be unnecessary at the present time. The committee would thank the memorialists for the expression of their views.

Instruction in Ophthalmology and Otology.

Dr. MACKAY presented a report from the Education Committee. It set out that—

On May 28th, 1910, the following resolution by the Examination Committee was referred to the Education Committee for its consideration:—

In the curriculum of all the licensing bodies, with three exceptions, special courses on ophthalmology form an essential part. The committee are of opinion that every student of medicine should receive some special instruction in the subject. The committee do not think it necessary to insist that every student should be examined in ophthalmology, but they are of opinion that all students should be liable to be examined in some branch of the subject.

While the committee would commend the practice of giving specialised instruction in otology and diseases of the throat they do not think it necessary to insist, in the present crowded condition of the curriculum, that special courses and examinations should be made obligatory, provided the subject be included under the general headings of Medicine and Surgery.

The report was received.

Conclusion of Session.

A vote of thanks having been awarded to the chairman for his services in the chair, the business before the Council for the winter session was concluded.

The Council rose and will meet again in May, 1911.

THE LONDON COUNTY COUNCIL AND MEDICAL AFFAIRS.

Rearrangement of Coroners' Districts.

THE Public Control Committee in a report to the London County Council on Nov. 22nd referred to the resolution passed by the Council on Oct. 11th praying the King to order such alterations in the boundaries of the coroners' districts, exclusive of the franchise districts, as to make them coincide with the boundaries of the metropolitan boroughs. One effect of such an adjustment would be that extensive alterations would be made in the areas comprised in the southern and south-western coroners' districts, and since the Council's decision the committee had been advised that serious difficulties in regard to compensation, &c., might be encountered in taking steps to carry out the alteration of boundaries in the two districts mentioned. The committee was of opinion, therefore, that the alterations of boundaries should be confined at present to those cases in which the boundaries did not coincide because of alterations of parish areas. At the meeting on Nov. 22nd and again on Nov. 29th the consideration of the report was adjourned.

Observance of Health By-laws.

Replying to a question as to the enforcement of the Council's by-laws as to spitting on tramcars, Mr. White, chairman of the Highways Committee, said that seven convictions for contravention had been obtained and a few hundred letters of caution had been sent. It was extremely difficult for the conductors to deal with the matter, and he wished passengers could be persuaded to help. It would then be possible to do a great deal to check this objectionable habit.

Administration of the Provision of Meals Act.

The Education Committee of the Council on Nov. 23rd received from the Children's Care Subcommittee an exhaustive report on the working of the Council's scheme for providing meals for necessitous children. The subcommittee stated that existing arrangements by which children attended at either (*a*) buildings hired by or lent to the Council, (*b*) coffee houses, and (*c*) private dining centres were not completely satisfactory. It was difficult to ensure a proper supply of meals. As an alternative—notwithstanding the Board of Education's objection—the subcommittee thought it would be better to make a wider use of school halls. Teachers and others had urged numerous objections to this course, but the subcommittee stated that the children could all leave by 1 o'clock, so that there would be ample time for ventilation; the spilling of food was a trivial matter—all that was necessary was that the helpers should pick up anything on the floor of a greasy nature and the halls should be washed fortnightly instead of once in three weeks. The provision of accommodation for washing up was a difficulty, but it could be met by building annexes. The whole number required would cost £20,000. The subcommittee had to admit that from the Council's point of view the decision to enter into a four years' contract with an outside body for the supply of meals was ill advised and added that the ideal method would be the establishment of a dining hall and kitchen for each group of schools. The discussion was adjourned. On Nov. 30th, after debate on points of detail, the proposals of the subcommittee were agreed to.

Cleansing of Verminous Children.

The subcommittee also reported as to the cleansing of children infested with vermin, recommending that as the number of such children would probably show a progressive diminution arrangements should be made to use borough council cleansing stations rather than go to the expense of establishing special stations at the schools. Thirteen borough councils—the City Corporation made a free offer—were willing to do the work at a charge of 2*s.* per head, and agreements for one year should be entered into. For the remaining districts the County Council would have to make its own arrangements, adapting existing buildings or putting up temporary ones. Any scheme for cleansing the bodies and clothing of children would be ineffective unless their homes were cleansed too, and the borough medical officers were willing to coöperate in this. It was estimated that about 20,000 children required cleansing, and the agreements with the borough councils would provide for 12,000 of them. Three visits to the cleansing station would be necessary in each case. The proposals were agreed to.

Cost of Dental Treatment.

The subcommittee submitted a fresh recommendation in regard to the recovery from parents of the cost of dental treatment,[1] advising that instead of the definite charges then proposed each case should be considered on its merits, provided that some charge was made in all cases and that in no instance should the amount paid by the parent exceed 1*s.* As in the case of medical treatment, legal proceedings would not be taken where the local care committee was of opinion that the parents could not pay. The recommendation was approved.

Medical Treatment at Hospitals.

At the meeting of the County Council on Nov. 29th Mr E. A. H. Jay, who has just succeeded Mr. Cyril Jackson as chairman of the Education Committee, and who took a prominent part in the organisation of medical treatment in London through the agency of the hospitals, had charge of the Education Committee's report. He stated, in reply to a question, that inquiry had been made into the allegation, voiced by several speakers during recent debates on the question of medical treatment, that children had been sent away from certain hospitals because they had not with them a card issued to each child attending under the Council's scheme of medical treatment. The secretary of the St. George's Hospital wrote that every patient who applied for medical relief was treated, no distinction being made between patients coming with or without letters, or between attending school and voluntary patients. The authorities of the Poplar Hospital and of the East London Hospital wrote in similar terms.

[1] THE LANCET, Nov. 19th, p. 1507.

THE LANCET.

LONDON: SATURDAY, DECEMBER 3, 1910.

The Report of the Chief Medical Officer to the Board of Education.

THE annual report for 1909 of the chief medical officer to the Board of Education, presented to Parliament on Wednesday last, is a document of great interest and extremely cheerful tendency. Dr. GEORGE NEWMAN, chief medical officer to the Board, explains that the report is somewhat fragmentary in form and substance, adding that it is "a plain record and must speak for itself," and this it does in unmistakable terms, the account of the work done being given in so clear and comprehensible a manner that the lessons conveyed cannot escape the reader. Nor can the net message of the report be overlooked, which is that a vast revolution is taking place in our physical care of the youth of this country, the most active agent in which is systematic medical inspection of the State-educated children. Facts have been collected with regard to the administration of medical inspection and treatment, the physical education of school children, and the provisions made for defective or feeble-minded subjects, most of which are quite new, and some of which raise questions of far-reaching social importance. These things speak to work accomplished, and from reading the account of them we arrive at two conclusions, both of which are in accord with the expressed views of the chief medical officer. The first is, that in spite of all difficulties, limitations, and adverse conditions the national system of medical inspection and supervision of school children has now been established throughout England and Wales on a working basis; and the second is that the work of this system has not resulted, as was so freely prophesied would be the case, in the mere collection of statistics, but has, on the contrary, brought about a new social condition among us, under which thousands of children are now receiving physical aid, and in a secondary manner moral support, the absence of which has hitherto implied not only great misery to themselves but incalculable loss to the State.

During the year 1909 medical inspection became for practical purposes an integral part of the public health administration of the country. The fundamental principle of the Act of 1907, the Education (Administrative Provisions) Act, under which medical inspection became a statutory duty of local education authorities, was to promote the physical and mental development of children during school life, and the steps that were taken to this end have proved to be well-directed. The Act laid down that it was the duty of each local educational authority to provide for the medical inspection of children at admission to a public elementary school, while a later code made it a further requisition that all children should be examined upon leaving. Sooner or later there will be a third inspection age-group intermediate to these, and local education authorities may already expect to undertake this responsibility. As the schedule of medical inspection laid down by the Board of Education has been almost universally adopted by the authorities, some even stiffening it by actually requiring more information concerning their young charges than the schedule of the Board demands, we seem to be within a reasonable distance of the time when all our children will obtain the benefits of the new legislation in a thorough manner. London, where undoubtedly the situation is more acutely hard than anywhere else in the country, lags behind. The complicated difficulties under which the London County Council finds itself are well known to everybody, and for the present the Council school children of the metropolis will be placed at a disadvantage, but there is a sincere wish on the part of the Council to meet the situation squarely, and this being the case, we must hope that progress will soon ensue. The scheme of medical inspection is now approved and school medical officers have been recognised by 314 out of 327 local education areas. In these 314 cases the medical officer of health has been selected as school medical officer in 230 cases, while in the remaining 84 cases 74 school medical officers have been appointed definitely under, or in connexion with, the medical officer of health, and the remaining 10 cases show in their appointment some degree of coöperation. From the very beginning of the movement which led up to the passing of the Act we were of opinion that inasmuch as school hygiene could never be divorced from home hygiene, the more sympathy, and even combination, could be secured between the educational authority and the sanitary authority in the matter of medical inspection the better it would be for the children concerned. The view did not find universal favour, and some well-qualified thinkers upon education considered it a narrow one; but events have since justified the attitude which we took up, while the allegation that the routine work of the school doctor, working in coöperation with a sanitary authority, would be so monotonous and uninspiring that the service would be unpopular with the progressive medical man has broken down. Nowhere does it seem that the duties of the school doctor are being discharged in a perfunctory manner. It is, on the contrary, and as Dr. NEWMAN notes, gratifying to record that the reports from the school medical officers contain frequent references to matters lying without the routine of inspection, but which have been made the subject of inquiry during the year. Among such miscellaneous subjects, which have been reported upon in 1909, may be mentioned the employment of children out of school hours, many matters relative to the feeding of children, the medical examination of children attending swimming-baths, the influence of exercise upon heart strain, the problem of dust in school buildings, the relationship existing between various groups of diseases, the home conditions of consumptive children, and so on. The reports of school medical officers containing work upon these and other matters have many of them been reviewed in our columns upon their appearance, and we are able to testify to the interest created by such inquiries, while their value from a national point of view

may become very great. We therefore cordially endorse Dr. NEWMAN'S suggestion that school medical officers, wherever the time or opportunity allows, should select a subject for investigation and report, for they would in this way constitute themselves into a standing commission with a roving reference upon the health of the children of the country during the school age, and we cannot conceive the institution of any commission which would more conduce to the national health, happiness, and prosperity.

Systematic "following up" is required if a local education authority is to ascertain how far its system of inspection is not being wasted, and whether the facilities existing within its area, alike for prevention or for treatment, are being used. "Following up" is the stage intermediary between inspection and treatment. The result of the inspection having been communicated to the parent or guardian of the child, the next step is to make inquiries after a reasonable interval whether the remedy has been taken and why failure may have resulted in certain cases. In these proceedings the part played by the parent is, in our opinion, of paramount importance, and however inconvenient it may be sometimes, when the saving of time and perhaps the saving of space is an object, to dispense with the presence of the parents at the inspection of their children, there can be no doubt that parents ought to be urged to be present whenever possible If they have seen the inspection they can by word of mouth be impressed with the importance of the treatment recommended for the child, when they often become, to the surprise of their neighbours, pioneers of sanitary progress in their district. The influence of the teacher is also extremely weighty. Indeed, in the last annual report of Dr. THRESH, the county medical officer of Essex, the statement occurs that the head teacher is the dominating factor in the situation. This depends upon the personality of the head teacher and the measure of his hygienic knowledge; where, as is the frequent case, the head teacher is in full coöperation with the school doctor, the influence for good is without bounds, but an unprogressive attitude on his part is proportionately unfortunate. The school nurse and the school attendance officer have also their part in the work of following up, but the duties of the school nurse in assisting at the routine of medical inspection are very valuable, and it has to be remembered that if she is detached from these duties to do house-to-house visiting among the parents of the children she will not be so available for her other functions. It has been suggested that where this is the case the services of the district nurse, where there is one, should be employed, but the value of these services is not so great. Lastly, there remain care committees, and of the work of these excellent agencies we say but little now. Care committees are as yet formed on no particular pattern, and being frequently branches of existing organisations have varying precedents upon which to work. Dr. NEWMAN writes with full appreciation of the generous services of these voluntary bodies, whose use, we are sure, will be greater when a definiteness of aim has led to more uniformity in their work.

Dr. NEWMAN makes the general statement that in respect of the six million children in the public elementary schools of England and Wales about 10 per cent. of them suffer from serious defects of vision; from 3 to 5 per cent. suffer from defective hearing; 1 to 3 per cent. have suppurating ears; 8 per cent. have adenoids or enlarged tonsils of sufficient degree to obstruct the nose or throat and to require surgical treatment; 20 to 40 per cent. suffer from extensive and injurious decay of the teeth; 40 per cent. have unclean heads; about 1 per cent. suffer from ringworm; 1 per cent. are affected with tuberculosis of readily recognisable form; and ½ to 2 per cent. are afflicted with heart disease. The field for treatment is thus enormous. The immediate problems of the school medical service are to ascertain in each area what children are suffering from various defects and ailments and what is the character and degree of these ailments. In how many of these cases can the local education authority reasonably expect that, with the assistance of existing voluntary agencies, amelioration will be secured without further intervention by the authority? This has to be considered. Dr. NEWMAN'S report deals as fully as possible with the action taken by various local education authorities in respect to medical treatment, but the problems here involved have only been seriously considered by any large quantity of education authorities for a little over a year, and no very complete or symmetrical tale can be expected. During the year 1909 Dr. NEWMAN is able to report a widespread improvement of school arrangements, showing that the lighting, heating, ventilation, and sanitary condition of school buildings generally have received a degree of attention hitherto unknown. Much of this improvement of the sanitary environment of both teacher and taught has been due to the inspections and recommendations of school medical officers. The machinery of actual treatment has been set in work in numerous directions. Some authorities have arranged that the nurses employed to assist in inspection should be employed in the duties of treatment, acting in conjunction with the general practitioners, upon whom the care of many of these children devolves. Other authorities have made contributions out of the education rate to existing nursing associations in return for services in the care of the State educated children. Some authorities have decided to provide suitable and inexpensive spectacles free of charge after due precaution that the children's eyes have been examined by medical men and that the parents were unable to provide the spectacles for their offspring. Twenty authorities have made contributions out of the education rate to hospitals, and under these arrangements a large number of children have received treatment during the year; and despite the fact that this proceeding must be regarded critically, it certainly seems to have the advantage of simplicity. What is required, however, is a safeguard against resort to the hospitals by children whose parents are well able to pay for medical attendance elsehow. Such are the directions which treatment has so far followed; those who know little of the difficulties involved may not be impressed by what has been done, but those who have followed the course of what is really a social revolution will take a different view. They will join with us in congratulating Dr. NEWMAN upon being in a position to tell a story of such sound performance and such magnificent promise.

The Danger of the Enteric Fever Carrier.

THE existence of the "carrier state," and the infective ability of the "carrier," are conditions which are now almost universally recognised as important in the causation of enteric fever. In this country the inquiries of medical officers of health, medical inspectors of the Local Government Board, and army medical officers have brought to light several striking examples of the spread of infection by individual carriers. The subject has been studied abroad, in France and America, and on a larger scale in Germany at the bacteriological stations established in connexion with the elaborate campaigns against enteric fever which were organised some six years ago in Bavaria and Alsace-Lorraine. Valuable contributions have also been made in India, from the Central Research Institute at Kasauli, in Japan, and in other countries. The literature, however, is widely scattered and much of it difficult to obtain, so that hitherto it has hardly been possible for the English reader to obtain a comprehensive statement of the present state of knowledge on the prevalence of carriers and the bacterial conditions associated with them. The difficulty has been removed by the publication of a special report on "The Enteric Fever Carrier," which has been made to the Local Government Board.[1] In order that the information available from home and foreign sources might be systematically abstracted and reviewed from a bacteriological standpoint, the work was entrusted to Dr. J. C. G. LEDINGHAM, who is to be congratulated on the success with which he has carried out a very laborious task. The volume supplies information and commentary on all the principal instances of infectivity of carriers, the pathogenesis of the carrier state, and the treatment of carriers. Its issue will naturally lead to new inquiries regarding the degree of importance to be attached to the operations of carriers in explaining the spread or maintenance of enteric fever in this country. One such inquiry has already been made by Dr. THEODORE THOMSON, who collaborated with Dr. LEDINGHAM in the Local Government Board investigation, and has contributed a comprehensive and well-balanced review of the epidemiological considerations involved in his presidential address to the Epidemiological Section of the Royal Society of Medicine on Nov. 14th last. The enormous capacity for mischief of certain carriers to the people with whom they live or to the inmates of institutions for which they work has been proved beyond doubt. In the Göttingen case, reported by ROSENTHAL, a woman appears to have been responsible for the infection of at least 13 people for whom she prepared food between 1897 and 1906; the New York cook, according to SOPER'S inquiries, may be considered responsible for the occurrence of no fewer than 26 cases of typhoid fever in seven different families; the Brentry carrier, studied by DAVIES and WALKER HALL, is held to have originated enteric fever outbreaks in at least three institutions between 1904 and 1908; and several equally striking examples of intense and prolonged infectivity are given in this report. Carrier cases have also been suspected on many occasions of originating outbreaks or maintaining endemic typhoid fever in particular localities. Their ability to do so is supported by very strong circumstantial evidence, implicating healthy persons ascertained to excrete the bacillus typhosus, and rendering it unnecessary to assume strings of undiscovered or "missed" cases of enteric fever, for the existence of which no evidence at all can be found. Recent instances of the kind have been reported in England by Dr. R. W. JOHNSTONE and other observers, and accord with the results of many foreign investigators.

The carrier is a person, usually a woman, who, although in good health, carries the infectious material in the body and excretes the bacillus typhosus in fæces or urine. The excretion of the bacillus may continue, persistently or at intervals, during many months or years. The carrier state is not necessarily the result of a previous attack of enteric fever, or at least of any illness which can be traced or is known to the carrier. Enteric fever patients, however, may continue after convalescence to excrete the bacillus, sometimes for a period less than three months ("temporary carriers") and sometimes for much longer periods ("chronic carriers"), and it is naturally among persons who have been attacked by enteric fever that most carriers have been detected. Readers of Dr. LEDINGHAM'S report cannot fail to be struck by the magnitude of the observations which have been made by different bacteriologists with the object of ascertaining the existence of carriers and determining the frequency with which their excreta are infective. It is to be expected that these observers, working under different circumstances and employing different methods, would obtain very different statistical results, and that, other things being equal, a larger proportion of carriers will be found by those who have had the most frequent opportunities of examining excreta from individual cases. This is, in fact, the case, and much caution is necessary in accepting statistics representing either the proportion of carriers among those who have been attacked by enteric fever or the proportion of carriers present in a general population. But it would be wrong on this account to ignore the general trend of the evidence on these points. Taking strictly moderate estimates, it would seem that on the present criteria of the bacteriologist some 3 per cent. of enteric fever cases become chronic carriers. And as regards the proportion of chronic carriers in a general mixed population, a considerable series of observations is available which suggests the prevalence of carriers to an extent of something like 3 per 1000—a result which is perhaps surprising, but which we have no reason to consider in excess of the truth. The number of normal people, whether or not they have previously been attacked by the disease, in whose excreta the bacteriologists have found the typhoid bacillus is indeed relatively so high that current conceptions of the danger of the individual carrier must be very largely modified. On a basis of three persons liable to excrete typhoid bacilli per 1000 of the population, London alone would contain more than 14,000 carriers. And when it is considered that the total number of known enteric fever

[1] Reports to the Local Government Board on Public Health and Medical Subjects. (New Series, No. 43.) London: Wyman and Sons. Price 1s.

cases in London in 1908 was only 1357, and that carriers, however numerous, have not prevented the conspicuous decline which has taken place in the prevalence of enteric fever during the last half century, the danger of the average carrier would appear for practical purposes to be negligible. Carriers should be most abundant in towns which have recently passed through severe epidemics of enteric fever due, for example, to sudden water infection. Dr. THOMSON points out, however, that the prevalence of enteric fever in the years following the great water epidemics of Worthing in 1893, Maidstone in 1897, and Lincoln in 1905, was no greater than in the years preceding the water infection.

The infective potency of the average carrier, even when he is occupied in the preparation or handling of food, seems thus to be of a very different order to that of the Brentry dairywoman or the New York cook. Future inquiries may be expected to throw more light than we at present possess on the circumstances in which carrier infectivity becomes specially accentuated. Several observations noted by Dr. LEDINGHAM point to the importance of concurrent physiological or pathological conditions in the carrier which may lead to the periodical excretion of bacilli in unusual abundance or even in a state of increased virulence. And to a large extent, no doubt, the explanation is to be sought in other and less recondite circumstances. The dose of infective material is of consequence, and individuals of ordinary personal cleanliness should usually have few opportunities of conveying to others a harmful quantity of infective material derived from their fæces or urine. Again, many carriers are not concerned with food preparation and live in places where their excreta cannot easily contaminate soil or water. Dr. LEDINGHAM'S report contains a valuable account of the methods adopted with greater or less success in the medical treatment of carriers and of the precautionary or preventive measures which have been adopted when carriers have been detected. While strict surveillance seems necessary in the case of carriers of proved infective ability, especially where food preparation is concerned, there seems to be no warrant in our present knowledge for any drastic action in the case of every individual who has been ascertained by the bacteriologist to be in the carrier state. Fortunately, the principal measures which have resulted in the diminution of enteric fever in this country must have been as effective against the spread of infection by the carrier as against that of infection by persons suffering from the disease.

Practice by "Unqualified Persons."[1]

THE General Medical Council, in view of the evils to the community consequent upon the unchecked practice of medicine and surgery by unqualified persons, and after the completion of an inquiry which showed that in many countries the laws intended to prevent such practice are more stringent and more effective than those of the United Kingdom, intimated to the LORD PRESIDENT of the Privy Council, of which the General Medical Council is a department, that the Medical Acts do not sufficiently fulfil their declared purpose of enabling persons requiring medical aid to distinguish qualified from unqualified practitioners, and also that it is contrary to the interest of the public that medical and surgical practice should be carried on with impunity by persons holding no recognised qualifications. As a corollary to these propositions, the General Medical Council requested the Government to take steps for the appointment of a Royal Commission to inquire into the evil effects produced by the unrestricted practice of medicine and surgery by the unqualified persons referred to. On receipt of this communication the LORD PRESIDENT deemed it expedient in the first instance to have recourse to "ordinary means of information," and he appealed to the Local Government Board, the Scottish Office, and the Irish Government, asking that circulars might be addressed to the medical officers of health of each country inviting their opinion as to whether the practice of medicine and surgery by unqualified persons is increasing, and as to its effect upon the public health. The result, like the result of half measures in general, cannot be described as entirely satisfactory; but it has at least served to bring together a considerable amount of information and many opinions based upon extensive observation and experience. Replies to the inquiries have been furnished by over 1600 officers, and these replies have been summarised, either in the Privy Council Office or in that of the Local Government Board, for each division of the kingdom, although the Local Government Board expressly disclaims any responsibility for the views which are expressed. In each division the summary deals with quacks in classes, as herbalists, bone-setters, dentists, oculists, and so on, through the somewhat wide range of their various pretensions; and in each class we have a distinction between the mischief done by positively injurious treatment and the mischief done by treatment which in itself might be harmless, but which has prevented a proper course from being pursued in time. Under both heads the indictment is a terribly serious one, and reflects in the gravest manner upon a country by which such evils are tolerated.

A prominent place in the replies from all three divisions of the kingdom is given to the evils arising from the practice of midwifery by unqualified persons; but it is only in England that attention is specially directed to the proceedings of abortionists, whose practice is said to be "increasing considerably in many parts of the country," and where "advertisements of abortifacients appear in newspapers to an increasing extent." Specimens of the advertisements are given, and are of an exceedingly flagrant character, insomuch that no newspaper accepting them could plead uncertainty as to their true meaning and tendency. It will be remembered that we ourselves called attention to this subject 12 years ago in a series of articles entitled, "Quacks and Abortion," in which it became our duty to show that some of the newspapers professing the noblest sentiments were the most systematic offenders in this respect. We had the satisfaction of stopping the insertion of such advertisements for a time, but the exposure was forgotten, the smaller papers were again tempted, larger ones gradually

[1] Report as to the Practice of Medicine and Surgery by Unqualified Persons in the United Kingdom.

followed their example, and although the evil has not regained its original dimensions, invitations to produce abortion are again prominent in the columns of many of our popular instructors. The time has certainly come at which the admission of such advertisements should be rendered a criminal offence. Next to the abortionists, perhaps the chief stress is laid upon the doings of "bone-setters." We are told, for example, that their violent manipulations have occasioned real injury, that they undertake the cure of cancer cases with disastrous results, and that bad effects are reported from their treatment of cases of tuberculous bone disease, particularly in its incipient stages. It is manifest that in such cases they would often cause the dispersal of what might originally be a localised deposit, and that death from general tuberculosis might easily be an effect of their interference. A good deal is said of the treatment of eye disease by unqualified persons, especially by those assuming such titles as "ophthalmologist" or "qualified ophthalmic optician," or placing such letters as F.I.O., F.S.M.C. (Lond.) after their names, and thus leading the public to believe that they are fully qualified medical practitioners. The summary for England states that unqualified practice of this kind is strongly condemned in all quarters, and that eyesight has been seriously injured in many cases; while such conditions as glaucoma have not been recognised, and ophthalmia neonatorum has been treated with disastrous results. The unchecked diffusion of unrecognised infectious diseases, the cruel tortures inflicted upon sufferers from cancer, and many other incidental effects of quackery which are only too familiar to the medical profession, receive, more or less, the condemnatory notices to which they are entitled.

On the whole the report serves to exhibit, in a striking manner, the propriety of the original request of the General Medical Council for the appointment of a Royal Commission, the only body by which the truth in relation to the subject could by any possibility be brought home to the comprehension of the public, and before which the accuracy of such statements as those made by the medical officers of health could be investigated and established. A belief in quacks and quackery is by no means confined to the poor and the illiterate, and its prevalence is one of the consequences of systems of education in which, as FARADAY said, the cultivation of the judgment has been almost wholly neglected. It is possible that the sale of proprietary medicines is largely among the comparatively well-to-do, for it is manifest that the expense incurred in advertising them can only be rendered remunerative by an extensive sale at high prices, although it is well known that the drugs contained in them are seldom as expensive as the wrapping paper in which they are put up, and that the claims made on their behalf are absolutely without a shadow of foundation. When the quack business advertised as "Munyon's" first raised its head in this country, it was announced that a qualified medical man attended at the office, and that he read and considered the letters in which applicants described their symptoms, in order that he might instruct the packers which of several patent "remedies" they were to send in every case. There actually was such a person (one HART) who, in May, 1898, was consequently removed from the Medical Register for infamous conduct in a professional respect. When his case was heard by the General Medical Council he made a frank confession, from which it appeared that if he took the trouble to read the letters he did not know what the "remedies" contained, or what effects, if any, they were calculated to produce. All this was made public; but years later, under the management of the late Mr. CRIPPEN, who was not amenable to the jurisdiction of the Council, the business was still a going concern, and as far as we know the exposure had little or no effect upon the sales. We have to deal in the matter of quackery with a very easy and lucrative trade; and the willingness of the public to be deceived is such that revelations of the mendacity and greed of the advertising charlatan have but little effect upon the fortunes of that charlatan. The matter is one that well deserves the institution of a Royal Commission, upon which possibly some such legislation might follow as is about to be introduced in Germany.[2]

Annotations.

"Ne quid nimis."

THE ITALIAN CONGRESS ON SEXUALISM.

CONSIDERATIONS, significant alike in their number and their gravity, give special interest to the Congress just held at Florence, "Sulla Questione Sessuale," that is, on the relations of the sexes and their bearing on society. The Congress is the first of its kind yet held in Europe, and its seat is the central city of the Italian kingdom; facts, both of them, intimately connected with the progress of the Latin civilisation and the deteriorating influences to which that civilisation has long been subject. For what is true of Italy is in well-nigh equal measure true of France, both nationalities being confronted with the same problem, how to purify the moral life and how to antagonise the forces which are telling disastrously on the population physically, mentally, and economically. While in the French Chamber the Minister of Grace and Justice, in answer to pressing interpellations, has had to pledge the Government to active measures for the protection of the youth from the enervating literature which panders to lasciviousness and precocious vice, in the Italian Chamber the Premier, who is also Minister of the Interior, has taken the initiative in penalising the production and sale of that literature, with results already apparent in all the great centres of population, saved as these now are from the spectacle of children of tender years gloating over prints and letterpress appealing to the worst passions. As first steps in a salutary direction these measures are, indeed, meritorious; but they are only the beginning of a reform which must be carried far wider and higher in the social sphere. It was this further development of what may, for convenience, be called the "Anti-sexual Crusade," that engaged the Congress which has just closed its sittings in Florence, and if the "orders of the day" in which the discussions culminated were, at best, but indications of policy, educational and administrative, this much may be said in their favour, that they represent a keen and intelligent appreciation of the evils to be grappled with, and that they formulate recommendations, tentative indeed, and even crude, but eminently useful as suggestive of the duties of the State in the school, in the factory, and in the field. The senator Dr. Pio Foà, of the Subalpine Medical

[2] See p. 1650.

School, opened the proceedings with a paper on "La Pedagogia Sessuale." Starting from the principle that—

"Just as the twig is bent, the tree's inclined,"

he insisted on an early inculcation on the juvenile understanding of the physical constitution, of what "being born" means, of what powers the youth is endowed with, of the responsibilities these imply, and of the dangers of their abuse. This instruction, he contended, should not only come from the mother of the family, but should be conveyed by the schoolmaster or the schoolmistress, who, themselves adequately trained for the duty, can be trusted to use their discretion and their tact according to the young pupil's character, moral and intellectual. From this early or initiatory inculcation Professor Foà would proceed, before the pupil's leaving the higher school and entering on life or on special study, to medical instruction, which, conformably to his experience, can be "popularly" conveyed without infringement on delicacy, while imparting all the youth ought to know, for his own guidance, without needless detail. In association with this, the teacher, male or female, could show the evils of kindred indulgences such as alcoholism, and the results of all animal vice in physical deterioration, leading, for example, to tuberculosis or to one or other of the many neuroses which, in Italy especially, fill the police reports with incidents more or less criminal. These positions of the Subalpine consultant were mainly uncontested by the other interlocutors, except by some who insisted on the instruction being left to ecclesiastics—a recommendation which carried the discussion far afield, and raised the objection that an order vowed to celibacy was certainly not the best medium for conveying the lessons required. Recalled from this digression, the Congress proceeded to the consideration of the factors conducive to the immoral life, particularly in the great industrial centres where the young of both sexes are herded together in an atmosphere, moral as well as material, directly provocative of "animalità," or sexual desire, aggravated, moreover, by the poverty which forces families to live under the narrowest conditions as to space and detachment—a promiscuous crowding which blunts the moral sense and robs vice of half its shame. The turn thus given to the discussions brought the Malthusian doctrine to the front, and this again to the Nemesis that always overtakes the non-natural restriction of families. But by this time the more practical of the topics on the agenda paper had had the preponderance, and the Congress rose after carrying an order of the day fixing Milan as the seat of its next meeting, and nominating a committee, with Professor Foà at its head, for the formulation of a programme in continuation of discussions now seen to be of urgent interest, not in the Latin countries only, but in those of the other civilisations, Teutonic and Slav.

PROTECTION AGAINST TUBERCULOUS MILK.

THE model clauses on the subject of tubercle, in force in several of our large towns, contain *inter alia* a requirement that any dairyman supplying milk within these towns and who has in his herd a cow "affected with, or suspected of, or exhibiting signs of tuberculosis of the udder shall forthwith give written notice of the fact to the medical officer" of the town in which the milk is sold (whether the dairy be within or without the city), "stating his name and address and the situation of the dairy or premises where the cow is." A farmer near Leeds was recently prosecuted by the sanitary authority and a conviction was obtained for not having furnished this notice in regard to a cow in his herd which was suffering from tubercle of the udder. In regard to cows kept within the city it is the practice of the Leeds authority to have them examined by a veterinary surgeon in regard to the conditions of their udders, each dairy being thus visited some four times a year. This power of visiting and examining the cows in the herd only applies, however, to dairies within the city unless the medical officer has reason to suspect the existence of tubercle in the milk-supply. In the case of the particular farmer referred to, a specimen was taken of the milk supplied by him within the city early in July, and found to be infected with tubercle, and it was ascertained that a cow in the herd was suffering from a tuberculous udder, a fact which had not been reported to the medical officer of health. This is the second successful prosecution for non-notification of a tuberculous udder which has occurred in Leeds under the model clauses. The earlier case was that of a farmer within the city who had failed to notify the condition of his cow. The importance of a prosecution of this kind, especially where the milk is supplied from an outside farm, lies in the circumstance that great difficulty is experienced in detecting the presence of tuberculous cows in herds outside the city if assistance be not given by the farmers. In the present case the discovery was accidental and many weeks elapsed between the taking of the sample and the discovery of tubercle, and it is eminently desirable that a skilled examination should be made at once of any cow showing signs of tubercle of the udder. We are informed that had the farmer notified the condition as soon as he purchased the cow he would have obtained, without cost, expert assistance; and had the condition been only suspicious he would probably have been compensated by the corporation for any loss of milk due to the isolation of a cow with a possibly healthy udder. Such compensation is frequently made in Leeds when the diagnosis of tubercle of the udder is still uncertain, the corporation preferring to keep any suspected cow out of the milk herd until it is assured that the disease is not tuberculous. Under the present law it is only cows that have tuberculosis of the udder which can be excluded from the milk herd. The third interim report of the present Tuberculosis Commission shows clearly that a tuberculous animal, not suffering from manifest disease of the udder, may from time to time yield milk containing tubercle bacilli.

OPHTHALMIA NEONATORUM.

SINCE our previous remarks on this subject[1] a report recently received from the medical officer of health of the borough of Paddington provides further and welcome evidence of aroused interest in the subject amongst the public bodies concerned. Still more striking is the decision of the London County Council at its meeting on Nov. 8th to enforce the powers granted by the Public Health (London) Act (1891), making ophthalmia neonatorum compulsorily notifiable within the administrative County of London. In this most essential respect London is but following the example initiated in the Potteries, chiefly through the agency of Mr. H. H. Folker, and widely followed in more than 50 sanitary districts in various parts of England. Dr. R. Dudfield's report to the public health committee of the borough of Paddington contains an admirable *résumé* of the subject, cogently setting forth the need for notification and more efficient treatment on the basis of statistics derived from recent literature, but Mr. Sydney Stephenson's excellent monograph on Ophthalmia Neonatorum seems to have escaped attention, for it is not quoted in the scanty bibliography appended to the report. Notification in this disease is attended by peculiar difficulties which are well set forth in Dr. Dudfield's own words: "Notification to be complete must be on a different system to

[1] THE LANCET, July 23rd, 1910, p. 245.

that in force for the dangerous infectious diseases, with respect to which a doctor's certificate is the only form in practical use. Confinements being attended by three classes of persons, (*a*) medical practitioners, (*b*) certified midwives, and (*c*) 'handy women', and relatives, it is necessary that the duty of notification should be imposed on any person—irrespective of status and training—attending the mother during and after her confinement. In other words, the notification system should follow the lines of the Notification of Births Act rather than those of the Public Health Act. The change in system should not deprive professional men (and women) of their fees for certificates. Inasmuch as cases of ophthalmia neonatorum would under such system be reported by lay persons, the description of the disease must be in simple terms and be so framed as to cover even the (apparently) slightest and simplest form of eye trouble. Anything short of such a wide definition would result in cases of ophthalmia in children not under the care of a medical practitioner or certified midwife being unreported, and a plea of ignorance of the nature of the disease being put in by the 'handy woman.' It is among the cases attended by the last class that the disease is most likely to occur. Further, such notification should not involve all the restrictions imposed with respect to the dangerous infectious diseases by the Public Health (London) Act, 1891. Such principle has already been recognised with regard to measles and pulmonary consumption." The difficulties of efficient treatment are even greater. That they are well worth facing and combating is shown by the statistics of Mr. E. V. Greatbatch, chairman of the North Staffordshire Joint School Authority for Educating Blind and Deaf Children. In the five Pottery towns and Leek 75 cases were reported in the nine months to the end of last June. Of the 75 infants 61 recovered with full sight, 7 lost one eye each, and 2 became totally blind. Mr. Greatbatch points out that "an average blind person cannot earn more than one-half of the amount earned by a sighted person at the same occupation," and Lord Lichfield has estimated the cost of education of a blind child at £50 compared with £30 for the education of a normal child. These figures tell their own story, and the day cannot long be distant when the disease will be universally notified.

THE CHILDREN OF THE STATE IN HUNGARY.

THE methods employed in Hungary for the care of those who would be termed in England "pauper children" may be commended to all interested in social reform, and in particular to local administrators concerned with the care of children and the feeble-minded. It is always a shock to British pride to find ourselves distanced in the race for better social legislation, and to those unacquainted with Hungary it may come as a surprise to find existing in that country a system of public care for destitute children conceived in a spirit above anything as yet achieved in England. The class of children for whom provision is made appears to include not only those who in our country come under the head of "destitute," but also the permanent cripples and feeble-minded, idiotic, and the morally defective. The number of children dealt with is not large, but is rising rapidly; in 1903 it was 21,000 and in 1908 it was 44,000, out of a total population of about 20,000,000. The scheme adopted divides the country into 17 administrative centres, or "asiles," which are placed in large towns. Each centre includes homes or hospitals for acute cases, for chronic cases, and for sucklings, while in Budapest and one other city are small hospitals for operative surgery and for ophthalmic cases. With these exceptions all the asylums are constructed on the same model with trifling variations in plan and arrangement. Each has a non-medical executive head, who is responsible for the finance of the centre, and under him a steward. A controlling physician is attached to each, having an assistant who is usually a lady doctor. The children who are not invalided or otherwise disqualified are boarded out as soon as possible. This is effected in selected villages under selected foster-parents without regard to locality of birth or distance. The children and their custodians are carried free on the State railways in reserved compartments over a network of more than 15,000 miles of rail, and in 1908 over 46,000 tickets were issued for this purpose. The executive in each centre supervises the colonies strictly, and provides carefully for the future of each child on his discharge from tutelage. Each child on admission to the "asile" is accompanied by a schedule of health, including such particulars as previous mode of nourishment, condition of vaccination, and other particulars; the family history furnishes not only statements as to such ordinary points of inquiry as syphilis, insanity, or tuberculosis, but contains remarks as to hereditary neurasthenia, perhaps the first official recognition of "Weary Willie" as an important hereditary factor in the State. This contrasts strangely with the haphazard lack of information afforded to district medical officers in most unions in our country when they first visit boarded-out pauper children. The care exercised in the selection of wet-nurses, and the provision and control of milk, are also admirable examples of minute method.

OBESITY IN RELATION TO DISEASE OF THE DUCTLESS GLANDS.

THE question of the functional interrelation of the various ductless glands is curiously complex. It is scarcely an exaggeration to say that with the publication of each fresh clinical record our uncertainty is increased rather than diminished. One writer describes a pineal "syndrome" of changes in the body tissues and sexual impairment associated with a pineal tumour; the next reported cases of pineal tumour reveal no such changes. A number of cases of sexual infantilism in connexion with pituitary disease have been recorded, but precocious sexual development related to disease of the adrenals seems equally substantiated. In view of all this uncertainty certain writers have begun to describe "polyglandular syndromes" as though our knowledge were thereby added to. Analysis must precede synthesis. Let us take for examination the question of abnormal development of fat, both subcutaneous and within the body cavity. Many women become stout after the menopause, and superficial consideration will at once associate this change with defective ovarian secretion. As if to bear out this view, we remember that many domesticated animals put on fat after castration, especially the female. This is true in particular of the cow (Charlier). Further obesity after ovariotomy is well enough known (Strümpell). Launois and Cleret, on the other hand, have recorded a case of adiposis associated with precocious sexual maturity, and in this instance the temptation is to assign the change to some suprarenal defect. Again, we know that, apart from the subcutaneous changes that characterise myxœdema and give it its name, there is often an abnormal increase of fat, and the attribution of myxœdema to thyroid deficiency meets with universal acceptance. The condition of so-called "feminism" in the male, where the secondary sexual characteristics are those of the opposite sex, including abnormal development of the breasts and of subcutaneous fat, undoubtedly occurs where there is reason to suspect pituitary changes, but many of these patients have double testicular atrophy. Is this a cause or a consequence? The fact is that medical science has simply touched the fringe of the subject. Thyroid, testicle, ovary, suprarenal, and pituitary in turn seem to be incriminated. Yet we cannot

overlook the fact that it is more particularly in pituitary disease that fatty changes are to be expected. Launois and Cleret have published an interesting case in point. A woman, aged 33 years, enormously stout, with cyanosis of the face and hands, menstrual irregularities, and certain cerebral symptoms, was found post mortem to have a small tumour of the pituitary body involving the glandular part of the organ; the nervous part was normal. The tumour was an epithelioma consisting of acidophil, amphophil, and basophil cells, with others badly staining and others still atypical, voluminous, and multinuclear. There was no acromegaly. To attribute the obesity to the results of this tumour growth is, of course, most natural, but the thyroid was sclerosed and in a state of hypothyroidism, while the ovaries were also sclerosed and cystic. There are numerous recorded instances of "degeneratio adiposo-genitalis" (distinct from "feminism") in pituitary disease, but is the adiposis secondary to the hypophyseal or the testicular defect, or to both? Perhaps the least equivocal case is one due to Madelung. A perfectly normal and healthy child, aged 6 years, was shot in the head at a distance of 8 or 10 feet and fell unconscious. After four days of coma consciousness began to return. Shortly thereafter she began to show certain psychical symptoms, and, in addition, to put on fat rapidly. Three years later she was very fat indeed. X ray examination showed clearly that the projectile was lodged in the sella turcica. If we may argue from this case we may assume that obesity may certainly be of primary hypophyseal origin, and where the lesion is polyglandular perhaps there is a reciprocal disturbance of metabolic balance, so that it becomes difficult, if not impossible, to assign the clinical symptoms to direct defective function of any one gland in particular, at least until much more is known of the subject.

INFANTILE BERI-BERI.

MUCH light has recently been thrown upon the etiology of beri-beri by the researches of Fraser and Stanton in the Federated Malay States and by other investigators elsewhere; but a new problem in connexion with this disease has recently been raised in a paper read at the biennial meeting of the Far Eastern Association of Tropical Medicine, and published in the July number of the *Philippine Journal of Science*, by Dr. Allan J. McLaughlin, assistant director of health for the Philippine Islands, and Dr. Vernon L. Andrews, assistant professor of bacteriology and pathology in the Philippine Medical School. These observers have been making a study of the causes of the excessive infantile mortality in Manila, and their inquiries have led them to the conclusion that a large number of infants die from a disease presenting a definite pathological picture for which they say no better name can be given than "moist beri-beri." The total deaths certified from this cause in children under one year of age in Manila for the fiscal year 1908–09 amounted to 595. But this does not, it appears, represent the full mortality from the disease. Post-mortem examination of a number of cases certified as due to convulsions, bronchitis, and broncho-pneumonia demonstrated that the cause had been wrongly given and that death was due to "moist beri-beri." In a series of 219 necropsies on infants dying under one year of age no fewer than 124 were found to present the characteristic appearances of this disease. The main post-mortem conditions observed were: (1) dilated and hypertrophied right heart; (2) congestion of all internal viscera; and (3) anasarca. The investigators did not themselves see the cases during life, but were dependent on others for the clinical histories, which, however, in a number of instances were meagre and not always trustworthy. The symptoms noted were chiefly dyspnœa and cardiac embarrassment with general œdema. The illness was said in some cases to have lasted only a few hours, seldom more than two days, but it is possible that the ailment had existed longer than this, perhaps from birth. It is a very noteworthy fact that nearly all the cases examined were under two months of age, and, what is still more surprising, they were almost without exception *breast fed*. It is distinctly stated that in none of the cases in which a necropsy was made was any rice or other artificial food found in the baby's stomach. In nearly every instance the mothers themselves presented some symptoms of beri-beri, and a number of them admitted that they had already lost other infants who had suffered from a similar illness. The etiology of "moist beri-beri" has not yet been fully investigated, but there seems to be some suggestion that a relationship exists between this malady and the poor quality of the milk yielded by Filipino mothers. This condition of the mother's milk, which is probably deficient in certain essential elements necessary for the normal nutrition of the infant, is due no doubt to the physical condition of the native mother, who, as a rule, lives in chronic poverty with consequent insufficiency of proper food, more particularly during the periods of pregnancy and lactation. Nevertheless, Dr. McLaughlin and Dr. Andrews say that they cannot overlook the possibility of an ultra-microscopic organism being concerned in the production of the disease. It is, however, proposed to make further investigation into "moist beri-beri," with detailed clinical observation of cases, preferably in hospital, where laboratory and biological tests can be readily applied, and where examination of the patient's body fluids and excreta can be carried out. Although the occasional occurrence of beri-beri in infants is mentioned in works upon the disease, we gather that this has hitherto been regarded as rather exceptional. Some ten years ago Professor Hirota of Tokyo described a disease discovered by him in infants brought to his clinique for treatment, and which he named "infantile beri-beri." The native medical practitioners in Manila appear to have become acquainted with the views of the Japanese professor and during the past few years have been certifying deaths as due to this cause. The ailment, we learn, is not often seen by the American physicians in the Philippine Islands, since the poor people are attended, if attended at all, by Filipino medical men exclusively. So far as we are aware no attempts have been made, until the inquiry undertaken by Dr. McLaughlin and Dr. Andrews, to confirm the diagnosis of infantile beri-beri by post-mortem examinations. It is greatly to be hoped that the further inquiries which are to be carried out will succeed in elucidating the etiology of this form of beri-beri, which has become so disastrous a factor in the excessive infantile mortality met with in Manila.

PUBLIC HEALTH IN SHANGHAI.

Dr. Arthur Stanley, medical officer of health of Shanghai, draws attention in his annual report to the municipal council of Shanghai for 1909 to the satisfactory state of the public health for the year. The native population was calculated at 550,000, and the foreign population for the same period was calculated at 15,000; the death-rate among the former per 1000 during the year was 15·1, and among the latter 16·7. Tuberculosis heads the list of fatal diseases both among foreigners and natives and calls for a measure reducing the overcrowding which is so apparent in the settlement. Beri-beri is now a prominent cause of death among foreigners, coinciding with the increased Japanese population. Plague-infected rats were found throughout the year, but there were no human cases. The public measures most needed are an extension of the health office and laboratory buildings; the completion of the

isolation hospital to include accommodation for cases of tuberculosis among foreigners; and the establishment of health stations in each sanitary sub-district. The Shanghai Pasteur Institute for anti-rabic treatment has done good work; since it was opened in 1899 268 persons have received treatment; during the year under review 28 cases have been treated with success. The hospitals have all been satisfactory. The police hospital for the Sikh police from India reports that tuberculosis continues to be the commonest cause of invaliding out of the service. Venereal disease accounts also for a relatively large proportion of the sickness occurring in this force.

THE TREATMENT OF AORTIC ANEURYSM BY THE INTRODUCTION OF WIRE AND THE PASSAGE OF A GALVANIC CURRENT.

THERE are few morbid conditions which seem less open to heroic treatment than aneurysm of the thoracic aorta. Any direct attack upon so formidable a disease of so vital a structure appears only to invite disaster. Nevertheless, the desperate nature of the malady offers some justification for the adoption of any method of treatment which holds out a prospect of substantial improvement in the patient's condition. Doubtless it is this motive which has led physicians to take the risks that are involved in the introduction of wire into the sac and the passage of a galvanic current through the wire. Professor A. A. Eshner has been able to collect and tabulate records of no less than 36 cases in which this treatment was adopted, in addition to two cases of his own, which were published in the *American Journal of the Medical Sciences* for October. He considers that in the vast majority of these cases the intervention was justified by prolongation of the patient's life and amelioration of symptoms. It is contra-indicated in fusiform aneurysm. The technique, he says, is simple; in his cases, as apparently in other cases, local anæsthesia sufficed. Under aseptic conditions a hollow needle of gold, silver, or platinum, insulated except at its tip, is introduced to some depth into the most prominent part of the sac, and through this gold or silver wire is fed into the sac till it is filled. Usually 10 or 12 feet of wire will suffice. Should the wire kink before the sac is full the needle may be withdrawn and re-inserted in another place, or one or more additional needles may be used. The end or ends of wire are connected with the positive pole of a battery, the cathode being placed upon the back; a current rising gradually from zero to 60, 80, or 100 milliampères and as gradually decreasing is then passed through for an hour to one and a half hours. The hæmorrhage is limited to a spurt of blood at the introduction of the needle. Pulsation is noticed to diminish with the passage of the current, if not before, and a similarly immediate relief from pain and dyspnœa is experienced. From Professor Eshner's table it appears that in 19, or exactly half the cases, death followed within a month of the wiring, the best result being that obtained by Professor Rosenstirn, whose patient lived nearly 12 years after the operation. One of Professor Eshner's own patients lived four weeks, the other a little over seven months. In both cases post-mortem examination seemed to prove that the operation had not only done no direct harm, but also that it had very materially expedited the progress of clotting within the sac. The impression left upon the mind by a perusal of Professor Eshner's careful tabulation is that the method will never have a wide field of usefulness, and that its use is scarcely justifiable except in cases of sacculated aortic aneurysm so far advanced that there is no hope of spontaneous cure.

FREIBANK MEAT.

THE December number of the *Contemporary Review* contains an article on "Cheap Meat," which is likely to attract considerable attention at the present time. The writer, Miss Smith Rossie, there tells of her observations at a German Freibank, and gives forcible expression to her dislike of the kind of meat which she understood to be sold at these establishments. We have no concern with the political purpose of the article, but we would suggest that it would be well for those whom it interests to study any good account of the general system of meat inspection in Germany before following Miss Rossie too far in her commiseration with the poorer classes in Germany by whom such meat is eaten. The provision of Freibanks is not essential to the imperial meat inspection system, although they have been established for many years in a considerable number of German towns. At the public abattoirs of these towns, meat which after examination is judged to be only conditionally fit for food ("bedingt tauglich") by reason of disease not calling for total condemnation, together with certain meat of poor quality, passes to the Freibank for special sale. Before the diseased meat is allowed to be sold it is treated, as circumstances require, by removal of diseased portions, by prolonged freezing and salting, or by sterilisation in digestors. From the last annual return of meat examined in the slaughter-houses in the German Empire, it would appear that less than 0·5 per cent. of the total meat dealt with was classed as "bedingt tauglich." Although Freibank meat is readily sought after by many people of the poorest class in places where it is available, it must not be regarded as the staple or even as a usual food of the German working class in general. Probably many working class families in Germany share Miss Rossie's aversion to eating meat derived from diseased animals, no matter how it has been treated. The existence of such natural objections, however, is fully recognised by the German law, which makes stringent provision against the sale of Freibank meat to restaurant-keepers, sausage-makers, and other traders, and prevents it from becoming an ordinary article of commerce. The consumer must fetch it from the Freibank, and need not go there unless he chooses. As regards the wholesomeness of Freibank meat, it may be said that where, as generally in Germany, a sufficient staff of trained experts is employed, and the arrangements for handling and treating the meat are efficient, the danger run by the consumer must be of very small proportions. It is impossible, perhaps, to say that it is entirely removed. It must, for example, often be doubtful whether meat sold without sterilising after removal of tuberculous lesions is in reality free from infective ability, while in the case of meat which is sterilised it is still sometimes necessary to remember the possible presence in the meat of bacterial toxins which are highly resistant to heat. Under English administration practically all meat of the "bedingt tauglich" order which came under the notice of our sanitary officers would be condemned outright, and if we examined all our meat and discovered disease in it with the thoroughness of the Germans, we might congratulate ourselves that we have no use for a Freibank, and that the poorest of our population would probably be strongly prejudiced against such an institution. Unfortunately, however, there are facts concerning the disposal of diseased meat in this country that will not allow of such complacency. From the public health point of view, diseased meat which in England may reach the consumer by way of the "slink" butcher or dealer is hardly to be preferred to that which in Germany is sold openly and as a class apart after expert examination and treatment.

GANGRENE OF AN OPERATION WOUND DUE TO THE COLON BACILLUS.

A MILD infection of an operation wound with the colon bacillus is not of infrequent occurrence in abdominal surgery. In the *Journal of the American Medical Association* of Oct. 29th Dr. E. A. Babler has reported a case, which so far appears to be unique, in which necrosis was due to this cause. A man, aged 45 years, was admitted into hospital on May 14th, 1910. He had suffered frequently from malaria. Three days previously, while tying his shoe, he was seized with a stitch in the right side, and the pain had been more or less persistent since the onset. On the next day he had a chill which was followed by fever. On admission he complained of severe pain in the region of the right ninth intercostal space. He was anæmic and emaciated and had an anxious expression. The respirations were somewhat shallow and accelerated. There was a slight cough, which caused pain in the right side. Over the right axilla harsh inspiration and blowing expiration were heard, and throughout the chest numerous dry râles. Vocal resonance and fremitus were increased over the middle and lower lobes of the right lung. A friction rub was heard close to the right costal margin on both inspiration and expiration. Over the lower lobe of the left lung there was relative dulness. On May 16th a leucocyte count gave 19,100, and on the 30th 24,800. On June 5th the number had dropped to 10,700. There was bulging in the right hypochondrium. On June 23rd subphrenic abscess was diagnosed, and on the 24th an incision 2 inches long was made under cocaine anæsthesia in the anterior axillary line over the most prominent part of the bulging mass, and about two quarts of fluid resembling the pus of a hepatic abscess were evacuated. The abscess was found to be subphrenic, although the palpable liver surface was roughened. The pus contained the colon bacillus in pure culture and showed no liver cells. A double drainage-tube was inserted. The discharge from the wound was profuse. On July 18th the margins of the wound became very red and somewhat swollen. The inflammation spread. On the 23rd the margins of the wound became necrotic and discharged grumous substance, which yielded a pure culture of the colon bacillus. On August 10th an autogenous culture of the bacillus was injected, but was followed by a rise of temperature and seemed to make the patient worse. The area of skin destruction became more and more extensive until at the time of death, which occurred two months after the operation, an area of the size of the palm was involved. At the necropsy it was found that the floor of the abscess was formed by the base of the liver and the roof by the base of the lung. The greater portion of the intervening diaphragm was destroyed.

HELIOTHERAPY IN TUBERCULOSIS.

IN an annotation in THE LANCET of Nov. 12th, p. 1435, we called attention to the remarkable results obtained by heliotherapy (the prolonged exposure of the diseased part to the sun's rays) on the Mediterranean littoral. In the *Boston Medical and Surgical Journal* of Oct. 27th a special correspondent contributed an interesting article which shows that similar results can be obtained in the Swiss mountains. At Leysin, which has an altitude of 1200 to 1500 metres, Dr. Rollier has established three sanatoriums and attained results which have attracted widespread attention. This locality has certain peculiarities which render it unusually suitable for heliotherapy—absence of wind, intense solar radiation, and great purity of air. Having found that Dr. Bernhardt of Samaden in the Engadine was treating sluggish wounds of all sorts by solar radiation, Dr. Rollier began little by little to apply this method to the treatment of surgical tuberculosis, and has found it to be successful. The majority of the patients are children suffering from fungous arthritis, Pott's disease, tuberculous arthritis, tuberculous glands, and tuberculous lesions of the skin. Dr. Rollier does not neglect the usual methods of treatment—injections, plaster jackets, X rays, and so on, but combines them with heliotherapy. His sanatoriums face the sun and are abundantly provided with balconies and open roofs on which the beds are wheeled out. The patient's entire body, front and back, is exposed to the sun in winter as well as in summer, during a time which varies with the state of health and state of training. The patient must be apyretic or nearly so. Dr. Rollier begins by exposure of short duration. The period and extent of the exposure are gradually increased until the whole body is exposed for as much as six or seven hours daily. The startling sight may be seen of a lot of naked brown children, some wearing plaster jackets, playing on beds in the brilliant sunshine in midwinter. Hats and screens are used to keep the sun off the face. Even in winter the temperature in the sun is high (113° to 122° F.). Moreover, there is almost total absence of wind. But for this the treatment probably could not be carried out. One of the first results of heliotherapy seems to be the disappearance of the pain—in coxalgia, for example. Tuberculous glands are either absorbed spontaneously or soften, and after one or two evacuating punctures disappear. Dr. Rollier argues that for heliotherapy a mountain climate is much preferable to the lowlands, where many of the sun's rays are absorbed by the dust of the atmosphere. In spinal or hip disease the surgeon generally regards ankylosis in a good position as the best result, but Dr. Rollier claims to obtain a restitution *ad integrum* with free movement. This is obtained even in some cases of open lesion in adults. It must be borne in mind that the treatment is a prolonged one and may take two years or more.

THE Edward Medal of the Second Class has been awarded to Mr. Edwin Arthur Dando, M.R.C.S. Eng., L.R.C.P. Lond., for courage shown on the occasion of the underground fire which occurred at the Russell Colliery, near Dudley, on April 17th, 1910.

THE Bradshaw Lecture of the Royal College of Surgeons of England will be delivered on Wednesday next, Dec. 7th, at 5 P.M., in the theatre of the College, by Sir A. Pearce Gould.

THE discussion on Dilatation of the Heart and Heart Strain, opened by Dr. J. F. Goodhart with the paper which we publish this week, was adjourned until Monday next, Dec. 5th, at 8.30 P.M., when it will be resumed by Dr. William Collier, of Oxford, followed by Dr. Samuel West, Dr. A. Morison, Dr. F. J. Poynton, Sir John Broadbent, Dr. C. W. Chapman, Dr. F. Parkes Weber, and Dr. Leonard Guthrie.

THIRTY-SECOND BALNEOLOGICAL CONGRESS, BERLIN. — This congress will be held in Berlin from March 2nd to 6th, 1911. Several papers have already been promised by well-known authorities in balneology. It is requested that notifications of further papers which it is intended to offer should be sent before Dec. 31st, 1910, to the Secretary-General Geheimrat Dr. Brock, Berlin, N.W., 52, Thomasiusstrasse, 24. The meetings of the congress will take place in the lecture-hall of the Polyclinic Institute of the University, Ziegelstrasse 18/19. In connexion with the congress there will be an exhibition of medical apparatus and preparations.

THE LONDON COUNTY COUNCIL AND A SLUM CLEARANCE SCHEME.

THE London County Council to-day has few graver problems to deal with than the housing question, which was first propounded by philanthropists in the middle of the last century. As matters stand, the value of house property and building sites in those central, overcrowded, and insanitary districts which we classify as slums has increased, and is increasing, with the result that such work as has been done in purchasing, demolishing, and rebuilding has been costly and has not brought any direct profit to those charged with it. At the same time, every improvement accomplished, however long delayed it may have been, is a matter for congratulation. The London County Council having abstained from carrying out any clearance schemes for nine years has now put itself in a position to face the struggle again, and should do so with the support and goodwill of London's citizens, although we may be allowed to call attention to the long period of consideration which has preceded action.

The Areas to be Dealt with.

At a meeting of the Council which was held on Nov. 8th a scheme for the Housing of the Working Classes Committee was brought up and agreed to after some discussion; it provided for the clearance of the slum areas known as Tabard-street and Grotto-place, Southwark, and Crosby-row, Bermondsey. It is proposed that the Council should acquire 13½ acres, mainly to the north of Tabard-street, 1½ acres constituting the Grotto-place area, and about an acre on the east side of Crosby-row; that the buildings now standing should be cleared away, that about 5 acres of the Tabard-street area should be reserved from building and maintained as an open space, that another portion of the available ground should be let for commercial purposes, and that on the residue should be erected dwellings capable of accommodating not less than 2450 persons. Some interesting facts were referred to by Major Boscawen, chairman of the Housing Committee, in introducing the scheme. The expenditure of the Council and of its predecessor, the Metropolitan Board of Works, upon clearances of a similar kind has amounted to £2,440,000, of which the sum of £1,349,000 remains as a debt. The slums which form the subject of clearance schemes do not exist, as a rule, on the estates of the great landlords who are so frequently denounced by popular orators in this connexion, an example in support of this being found in the comparatively small areas described above which are divided up among 105 freeholders and 60 leaseholders. The following figures were cited by Major Boscawen with regard to the Tabard-street area upon the authority of Mr. Charles Booth. The proportion per cent. of those living in comfort and in poverty respectively is estimated for the whole of London at 69·3 in comfort and 30·7 in poverty; for the whole of Southwark the corresponding figures given are 52·4 and 47·6, a balance being still left on the side of comfort. The Tabard-street area, however, has 80·9 per cent. of its inhabitants living in poverty and in comparative comfort only 19·1. Its death-rate at the time of the compilation of the statistics given was 36·8 per 1000, as against an average of 14·9 for the rest of London, its death-rate from phthisis being 3·88, as compared with London's 1·44; and its death-rate from infectious disease was estimated by the same statistician to be six times greater than that of London.

In these circumstances it may well be understood that the Council, having had a scheme laid before it by its responsible committee, determined to proceed with it at once without waiting for such possible variations of price and depreciations of estimated value as may be expected to result from recent financial legislation. We note, however, that Sir John Benn, while he disavowed any desire for delay in dealing with the plague spot under the Council's consideration, expressed the opinion that the new valuation, had it been waited for, would have reduced the price to be paid by £100,000. If this estimate be at all correct, the measure referred to will at least facilitate the rehousing of the poor.

We note that one of the county councillors who took part in the discussion of its Housing Committee's report attributed blame to the sanitary authorities of the districts involved for the conditions rendering drastic interference necessary. Certainly the Southwark borough council has been fully informed through the reports of its medical officer of health for many years as to the insanitary state of the slums about to be swept away, and the London County Council has also no doubt had the same source of information open to it. We find, for example, pointed reference to Grotto-place in the report made by Dr. F. J. Waldo, since appointed coroner for Southwark, so long ago as 1897. Its courts are so narrow that the inhabitants of opposite houses can shake hands with one another by leaning out of their front windows, and he then classified it as an unhealthy area, together with two other sites known as King's Bench-walk and Webber-row. Some of the buildings then and now objected to were formerly one-roomed houses, since converted by partitions so as to consist of two rooms, which originally were built for the accommodation of debtors committed to prison by the Court of King's Bench. In or about 1900 the London County Council dealt with King's Bench-walk and Webber-row, but left Grotto-place untouched on the ground that its death-rate was not so high as that of the other two districts. In 1900 also Dr. Waldo had under consideration for purposes of reform a group of streets, including part of Tabard-street, all of which have hitherto escaped interference. At the same time, if his reports dealing with Tabard-street, Grotto-place, and their surroundings have not borne fruit hitherto, he may take credit for having initiated in 1894 the policy which got rid of the slums once known as Brent's-court, Eve-place, Redcross-court, and Maypole-alley, and for the opening of Little Dorrit Playground for children opposite to the site of the old Marshalsea Prison upon the ground once occupied by Falcon-court and Birdcage-alley.

How the Sites will be Utilised.

The question of how sites so expensively acquired are to be utilised is one of some difficulty. They can be made into open spaces, workmen's dwellings of a sanitary character can be built upon them, or they can be let for commercial purposes and at a rent proportionate to their commercial value. Often there is no open space for use as a children's playground within a mile or two on the one hand, and on the other it must be remembered that a clearance scheme displaces a number of poor persons who go to increase the overcrowding elsewhere.

Presumably it is the more decent people elsewhere inconvenienced by such additional overcrowding who ultimately find their way into the new buildings, for the model dwellings erected upon slum sites do not attract the former inhabitants of the demolished rookeries, and the County Council does not profess to build for thieves and prostitutes, but to provide wholesome living accommodation for those who desire to live comparatively wholesome lives. The converted districts, in short, have to forget their past, although it may be instructive to recall it with regard to some of those named. In 1892 a passage leading to a house, now demolished, which abutted upon Falcon-court, was the scene of the brutal murder of a medical man, Mr. William Peter Kirwan, who was found there dead, having been assaulted and strangled and robbed in broad daylight. Three men were convicted of manslaughter and sentenced to long terms of penal servitude for this crime. In Redcross-court, also mentioned above as having already been reformed, was a common lodging-house, the deputy of which was an ex-convict, and which nightly sheltered at least 100 thieves and prostitutes. The crimes occurring in such a place were almost impossible to bring home to those who committed them. To go back to earlier days, in 1866 the last death from Asiatic cholera occurring in the parish of St. George the Martyr, Southwark, took place in Redcross-court, and it may be mentioned that this parish was credited with 242 deaths from typhus in the years 1863–65, without counting those of its inhabitants who entered hospitals outside its boundaries and died in them.

In such circumstances the duty is to provide a certain amount of decent housing accommodation, including, if possible, some substitute for the street as a playground for the young, and to do so with reasonable regard for the cost of what is done at the ratepayers' expense. The London County Council, as it will be observed, has decided to combine these objects in its latest scheme. It proposes to give an open space, perhaps not so beneficial so far as children are concerned as two of smaller size; to provide dwellings

for a number of persons equivalent to half of those displaced; and to diminish its loss on the transaction as far as possible by allowing the erection of warehouses upon part of the site acquired. We regret the necessity for the warehouses, and we might have desired to see an open space at Grotto-place, but we cannot ignore the need for economy when so much more remains to be done. The more the provision of living and travelling accommodation enables the humbler class of worker to live at a distance from his work the better it will be for his family.

REPORTS ON PLAGUE INVESTIGATIONS IN INDIA

ISSUED BY THE ADVISORY COMMITTEE APPOINTED BY THE SECRETARY OF STATE FOR INDIA, THE ROYAL SOCIETY, AND THE LISTER INSTITUTE OF PREVENTIVE MEDICINE.[1]

The Experimental Production of Plague Epidemics among Animals.

IN two previous series of experiments the Commission showed that healthy guinea-pigs did not contract plague when kept in close confinement with plague-infected guinea-pigs so long as fleas were absent, and that in the presence of fleas the disease readily spread from the infected to the healthy animals. It was objected by Gottschlich that the results did not necessarily apply to rats and could not be used as an argument bearing on the question of the mode of propagation of plague among rats in nature. The present paper details experiments showing that exactly the same results are obtained when guinea-pigs are replaced by rats. Healthy wild Bombay rats were confined in small huts with other rats which had been inoculated with, and subsequently died from, plague; in one hut in each experiment abundant fleas were present, in the other there were no fleas. Considerable difficulty was experienced in securing the complete freedom of the control rats and huts from fleas, but the following results were obtained in eight experiments in which this condition was obtained:—

Results of Experiments with Rats (Inoculated and Uninoculated) put into Huts containing Fleas and into Huts containing no Fleas.

—	Rats put into huts containing fleas (about 24 fleas per rat).	Rats put into huts containing no fleas.
Inoculated rats	70	84
Died from plague	63 = 90·0%	73 = 86·9%
Uninoculated rats	125	125
Died from plague	57 = 45·6%	0

In seven other experiments the control huts were not altogether free from fleas, one or two fleas being found in each. In these 105 healthy rats were exposed to possible infection from 78 rats dying from inoculated plague and only one died from plague. In the corresponding huts in which fleas were more abundant 64 inoculated rats died while living with 105 healthy rats, and of these latter as many as 38 (36 per cent.) took plague and died. These experiments, therefore, support the view that the rat flea is of paramount importance in the dissemination of plague among rats. A few rats dead from plague were eaten in both groups of huts, but the figures show that this was of no account in spreading the infection.

Resolving (Chronic) Plague in Rats.

The abscesses in the viscera, especially in the spleen and in the peripheral lymphatic glands, some of which contain living plague bacilli, which have previously been described as "chronic plague," are shown to be plague lesions in the process of healing; the name "resolving plague" is more appropriate. These appearances have been found frequently in rats in Belgaum and Poona, and a re-examination of Bombay rats shows that they also occur there; they had previously been found only in Punjab villages. It is also shown now that they are found most frequently towards the close of, and immediately after, the acute plague epizootic. The lesions in the spleen and mesenteric glands often ultimately find their expression in peritoneal adhesions. No evidence has been obtained that these abscesses are of actual importance as a source of acute rat plague.

On the Spread of Epidemic Plague through Districts with Scattered Villages.

In large towns, such as Bombay, the infection of plague is carried over from one epidemic to the next by the persistence of acute plague among the rats accompanied by a few human cases. But in small communities each annually recurring epidemic is separated from that preceding by an interval more or less prolonged, in which plague cannot be found in either rats or men. It is obviously an important practical question in such places whether each successive epidemic has its origin from remnants left over *in situ* from the previous epidemic, or whether on each occasion infection is due to plague bacilli being brought in afresh from outside. Towards the solution of this question of "recrudescence" or "importation" a great mass of data has been collected and discussed by Major George Lamb relating to the plague history over a period of four or five years of more than 2500 villages in the Punjab and United Provinces. Dr. Greenwood, statistician to the Lister Institute, contributes the first part of an analysis of these data by statistical methods. Their chief conclusions are: (1) that the occurrence of epidemics among the villages is not a chance distribution; (2) that the size of the village is an important factor, the larger villages being more liable to attack: in two out of the three districts investigated the distribution of epidemics among villages of equal size has not been shown to be other than random; (3) that the fact of a village having been infected in any one epidemic does not render it more liable to be infected in the next following epidemic; (4) that a study of the distribution on maps of infected villages month by month suggests a spreading-out of infection from various centres. On the whole, therefore, the authors conclude that importation is a more important factor than recrudescence in the annually recurring epidemics in these villages.

Observations on Plague in Belgaum, 1908–1909, and in Poona, 1908–1909.

These two papers contain the result of a close inquiry, lasting in each case for a full year, into the occurrence of plague in rats and men in Belgaum and Poona, together with studies of the rats and fleas. The facts collected under the former heads do not lend themselves to summary treatment. With regard, however, to the fleas, it was ascertained that there was a definite seasonal variation in the prevalence of fleas which is closely correlated with the seasonal prevalence of plague. Thus—

Month.	Belgaum.		Poona.	
	Plague deaths, average per week.	Average number of fleas per rat.	Plague deaths, average per week.	Average number of fleas per rat.
January...	9	5·9	22	5·0
February	6	7·7	5	4·8
March	1	5·9	1	4·4
April	0	5·6	1	2·5
May...	0	3·9	1	2·4
June	1	7·4	0	2·2
July	2	14·5	0	0·5
August	9	16·3	2	0·8
September	28	16·9	28	0·1
October...	23	15·2	102	7·6
November	23	13·6	89	7·2
December	19	8·3	46	6·7

These results therefore fully confirm the data already obtained in Bombay, Kasel, and Dhand. The climatic conditions in Belgaum and Poona are quite different from those which prevail in Bombay. This strengthens the conclusion

[1] Journal of Hygiene, vol. x., No. 3, pp. 313-568. Accounts of previous reports will be found in THE LANCET of Nov. 3rd, 1906, p. 1233; July 27th, 1907, p. 246; and Jan. 25th, 1908, p. 253.

that the prevalence of plague depends upon the prevalence of fleas rather than that both phenomena are independently conditioned by circumstances of temperature, &c. The present data suggest a connexion between the atmospheric humidity and flea prevalence. In Belgaum an interesting census was made of the various animals living in the native houses; there was no evidence that cats afforded any protection. For the valuable discussions of the causes of the rise and fall of epidemic plague in these towns, the original memoirs should be consulted.

First Report on Investigations into Plague Vaccines (by S. Rowland).

Dr. Rowland, of the Lister Institute, working at Elstree under the direction of the Advisory Committee, has attempted to isolate from plague bacilli the substance which, when inoculated into animals, arouses an immunising response. In a series of experiments conducted by exact methods, he shows that after killing the bacilli with chloroform and drying with anhydrous sodium sulphate a nucleo-proteid may be extracted from the bodies of the bacilli which possesses immunising properties of a high order. A single dose of 0·001 to 0·01 milligramme reduces the mortality on subsequent inoculation with virulent plague from about 70 per cent. to about 13 per cent. The whole bacilli killed with chloroform given in the optimum dose are much less efficacious. The inquiry is still in progress.

Interim Report by the Advisory Committee.

The following statement embodies the chief conclusions which have been provisionally reached by the Advisory Committee as the result of the investigation made under their direction from 1905–09 into the mode of spread of plague in India.

1. Considerable epidemics of human plague consist almost entirely of cases of bubonic plague and are directly dependent on the occurrence of epidemic plague in rats. The development of the rat epidemic precedes the human epidemic by an interval of about a fortnight. There is no evidence that any animals except rats play an important part in plague epidemics.

2. *Epidemic plague in rats.*—(*a*) That fleas which have sucked the blood of a plague-infected rat can transmit the disease to healthy rats to which they are transferred. The plague bacilli multiply in the stomach of the flea, and the flea may be still capable of conveying infection three weeks after having imbibed plague-infected blood. (*b*) If plague-infected rats are kept in close confinement along with healthy rats no epidemic of the disease occurs in the absence of fleas. In the presence of rat fleas the disease spreads from the infected to the healthy animals, and the rapidity and severity of the epidemic so produced is in proportion to the abundance of fleas. (*c*) Rats may be infected by feeding them upon the bodies of other rats dead from plague. The distribution of the lesions in the bodies of naturally infected rats corresponds with that in rats experimentally infected by means of fleas and not with that in rats infected by feeding. The committee, therefore, conclude that *in nature plague is spread among rats by the agency of rat fleas.*

3. *Epidemic plague in man.*—(*a*) Bubonic plague is not directly infectious from man to man as is shown by the experience of plague hospitals where there is no tendency for the disease to spread from the sick to the attendants. (*b*) Material epidemics of plague in man are always associated with epidemic plague in rats. Epidemic plague among rats provides a large number of infected rat fleas, and owing to the mortality among the rats brings these fleas on to human beings. (*c*) Rat fleas (*Pulex cheopis*) bite human beings, especially in the absence of their natural host. (*d*) Rat fleas containing plague bacilli and found capable of transmitting plague to animals may be caught in plague-infected houses. (*e*) Animals susceptible to plague (guinea-pigs, monkeys) placed in plague-infected houses if unprotected from fleas may contract the disease, whereas such animals under the same circumstances remain free from plague if protected from fleas. (*f*) The commission have also performed numerous experiments with a view of testing other possible modes of infection, and have found that—(i.) In the absence of fleas no epidemic resulted when animals susceptible to plague (guinea-pigs) were kept in close contact with infected animals, although the animals took their food off floors grossly contaminated by the excreta of their infected companions; (ii.) that susceptible animals (guinea-pigs) caused to live upon and feed off floors artificially saturated with plague cultures failed to contract the disease; and (iii.) that the excreta of plague-infected patients may contain plague bacilli, but the bedding, &c., of plague patients soiled with excreta containing plague bacilli was not found to be infective to highly susceptible animals caused to live in and upon the bedding. The committee therefore consider that *in the great majority of cases during an epidemic of plague man contracts the disease from plague-infected rats through the agency of plague-infected rat fleas.*

4. *The seasonal recurrence and spread of plague.*—(*a*) The committee have obtained no evidence that under ordinary conditions the plague bacillus survives for more than a few days outside the bodies of men, animals, or fleas. (*b*) In large towns plague may persist throughout the year since a few cases of acute plague in men and rats occur during the non-epidemic plague season. (*c*) In villages there was no satisfactory evidence that such persistence is of other than exceptional occurrence and it seems probable that the recurring annual epidemics in such places are due in most cases to fresh importation of the infection. (*d*) There is no evidence that plague infection is carried for more than short distances by the spontaneous movement of rats. Plague appears to be commonly imported into a fresh locality about the persons of human beings, though the transference of infected rats and fleas in merchandise must be considered. (*e*) In districts which suffer annual epidemics of plague, the rat epidemic, on which the human epidemic depends, occurs during some part of that season when the prevalence of fleas is greatest.

THE MEDICAL PROFESSION AND MUNICIPAL HONOURS.

THE following members of the medical profession have been elected or re-elected to the mayoral chair. Brief notes of their medical and municipal careers are given:—

Faversham.—Mr. S. R. Alexander, M.D. Lond., M.R.C.S. Eng., L.S.A., is an old student of London University and Guy's Hospital. He has been chairman of the governors of the Faversham Grammar School for several years, is a trustee of public charities, a governor of Wreight's and Gibbs's Schools, and represents the University of London on the higher education committee. His election to the mayoral chair is believed to be a unique event in the history of the borough, as he has been previously unconnected with the corporation. As Mayor of Faversham he is a Baron of the Cinque Ports, and as such is commanded to attend the Coronation of the King in Westminster Abbey. He married in 1890 a daughter of the late Mr. Alfred George Schiff.

Hartlepool.—Mr. W. S. Gibb, M.B., C.M. Edin., is an honorary physician to the Hartlepools Hospital.

Montgomery.—Mr. Nicholas Watson Fairles-Humphreys, M.R.C.S. Eng., L.S.A. (re-elected), was born in 1837 and studied medicine at St. Bartholomew's Hospital. In 1885 he was elected alderman for the borough of Montgomery and has been 12 times mayor. He is a justice of the peace for the county of Montgomery, was high sheriff in 1882–83, and has been a county alderman since 1889. His grandfather, Nicholas Fairles, justice of the peace for the county of Durham, was the originator of the lifeboat movement and chairman of the first committee.

Newark.—Mr. F. H. Appleby, M.R.C.S. Eng., L.S.A., J.P. (re-elected), was a student of University College, London, and went to Newark 45 years ago as house surgeon to the hospital. He has since practised in partnership in that town, and is now the *doyen* of the profession in Newark and senior honorary surgeon of the hospital. He has done excellent work as lecturer and examiner to the St. John Ambulance Association, and in recognition of his services was appointed Honorary Associate of the Order of St. John of Jerusalem; last March he was promoted to Knight of Grace of the Order. The Volunteer movement has also commanded his active sympathy. He joined the 4th Notts as surgeon in 1884 and gradually rose to be senior medical officer of the North Midland Brigade, ranking as Brigade-Surgeon-Lieutenant-Colonel. On the formation of the Territorial Forces he was

appointed a military member of the County Association, but has now retired with the rank of Lieutenant-Colonel of the Royal Army Medical Corps, T.F. He has also received the V.D. He has been a member of the town council for 20 years and has done good work on the sanitary committee, of which he is chairman, and also in connexion with the isolation hospital. Eleven years ago he was unanimously called to the office of mayor, which he filled with success. Besides being chairman of the free library committee and the museum committee, Mr. Appleby is connected prominently with several educational undertakings in the borough over which he presides.

Oswestry.—Mr. R. de la Poer Beresford, M.D. Glasg., L.R.C.P., L.R.C.S. Edin., L.R.C.P. Lond., V.D. (re-elected) has served his borough in the capacity of medical officer of health for 43 years, which makes him possibly the senior medical officer of health in England. He is the senior surgeon to the Oswestry Hospital and Dispensary and to the Ellesmere Cottage Hospital, and surgeon to the Cambrian Railway Company. He now holds the rank of Colonel, R.A.M.C., T.F., having received his first commission in the Volunteers in 1887.

Ruthin.—Mr. T. Owen Jones, L.R.C.P., L.R.C.S. Edin., L.F.P.S.G. (re-elected), received his medical education at Anderson's College, Glasgow, and qualified in 1894. He obtained the appointment of medical officer of health of the Ruthin rural district in 1898, when he went to reside in that district. He is deputy medical officer to H.M. Prison, inspector of school children, and lecturer and examiner to the St. John Ambulance Association. For six years he was a member of the Ruthin town council. In 1908, although not then a member of the council, he was unanimously elected mayor, which honour he again received in 1909, and this year for the third time has been unanimously chosen to occupy the mayoral chair.

Saffron Walden.—Mr. J. P. Atkinson, M.D. Glasg., L.R.C.P. Lond., L.R.C.S. Edin., was born in 1838. After serving a term of pupilage with Mr. Little, Mr. Young, and Mr. Adams of Boston, he proceeded to Glasgow University, where he received his medical education, and graduated as M.D. with honours in 1863, having previously passed the examination for the diploma of the Royal College of Surgeons of Edinburgh. In the same year he took the L.R.C.P. Lond. Subsequently he settled at Bampton, Oxon., but removed in 1881 to Saffron Walden, and finally retired from practice in 1908. He entered the town council of the borough of Saffron Walden in 1888 and in 1891 was elected mayor, being re-elected in the following year. He was again appointed in 1900 and re-elected in 1901, and was mayor at the time of the Coronation of the late King Edward VII. and received the Coronation medal. This year he has been elected mayor for the fifth time. Dr. Atkinson joined the medical staff of the 3rd V.B. the Suffolk Regiment, received the V.D. in 1904, and retired with the rank of surgeon-colonel in 1905. He has represented the town council on the joint isolation hospital board, of which he has been chairman since its incorporation in 1903, is a member of the Essex County Territorial Force Association, and has represented the borough on the Essex county council, and also on the county association recently formed for combating consumption.

Warrington.—Mr. G. W. Joseph, M.D. Durh., L.R.C.P.I., M.R.C.S. Eng., L.S.A., is an ex-president of the Warrington Medico-Ethical Society and was lately medical officer of health and public analyst for the borough of Warrington.

Wrexham.—Mr. S. Edwards Jones, L.R.C.P., L.R.C.S. Edin., L.F.P.S.G., who received his medical education at Anderson's and St. Mungo's Colleges, Glasgow, qualified in 1892. He was a prizeman in medicine and operative surgery. After holding the appointment of senior house surgeon at Glasgow Royal Infirmary in 1893-94 he commenced private practice. He has been a member of the Wrexham board of guardians and rural district council since 1905 and takes a keen interest in all public health matters. At one time he was medical officer of health for the combined borough and rural districts of Wrexham. In 1906 he was elected a member of the Wrexham town council and has been chairman of the health committee for three and a half years. In 1909 he was returned to the council without opposition and successfully advocated several important improvement schemes with regard to the health of the borough.

MEDICINE AND THE LAW.

Macrae v. *Harness: The Care of an Infant Mentally Defective.*

Mr. Justice Swinfen Eady was occupied for six days in hearing and deciding in the Chancery Division the claim of Douglas Gordon Macrae, a young man suing through the committee of his estate his step-mother, Mrs. Harness. The action was brought to obtain a declaration that money paid by the lad's trustees to the defendant during the plaintiff's minority for his maintenance and education had not been properly expended upon these objects and for an account of the money thus paid to her. Young Macrae was the son of a wealthy man who died in 1901, leaving the plaintiff, a boy 15 years of age, and a daughter. From the estate of the deceased an income of about £4000 a year was paid to his widow, whom he had married in 1897, and who was expected to keep up the principal residence of the deceased, a country house at Collingbourne. Out of the other half of her husband's estate the trustees allowed this lady £3000 a year in respect of the maintenance and education of her two step-children. The boy, according to her evidence, showed signs of mental weakness during his father's lifetime, giving trouble at home and at two schools which he had had to leave. In 1901, when the father had died, the conclusion was arrived at that the plaintiff's mental condition required special care, and the following provision was proved in the course of the case to have been made for it. At first a house was rented on his account at Eastbourne, where he resided under the care of Mr. H. N. Harness, a medical man who had been called in to attend him in London. Mr. Harness remained in charge until March, 1902, and then left. The patient remained at Eastbourne until December, 1902, the cost of his maintenance there being at the rate of £1200 a year, £50 per month having been paid to Mr. Harness during his care of the case. In December, 1902, Mr. Harness became engaged to Mrs. Macrae, whom he married in the following February. In January, 1903, Mr. Harness had arranged with Dr. Harry Corner that the boy should be taken charge of by him in a private home at New Southgate, the payment to be 4 guineas a week, to include board, lodging, laundry, and medical attendance, and an additional 2 guineas a week for a private attendant to sleep in the patient's room. According to Dr. Corner's evidence, the question of expense was to be considered, and, as a matter of fact, the inclusive charge was eventually reduced to 5 guineas per week, when it was considered that the patient would require less exclusive attention. At one time when £20 extra per month was charged in respect of the necessary employment of extra nurses, Dr. Corner was informed by Mr. Harness that this was more than could be afforded. The lad improved under Dr. Corner's care and was reported to the Commissioners in Lunacy as having no symptoms of insanity. In July, 1904, young Macrae, who had been removed from Dr. Corner's establishment, was placed under the care of a medical man at Farnborough, an arrangement being made for the payment of 6 guineas per week, to include an attendant, not necessarily trained, and not more than £1 for amusement. Evidence was given by this medical man's wife that Mrs. Harness in an interview with her said that she would also pay for anything very necessary or urgent. The limit of £1 a week for amusements was denied by the defence. The expense of a special attendant during a trip to Ireland was refused. The plaintiff remained at Farnborough for 18 months and then went back to his relations, living with them at a house where Mr. Harness did not himself reside, but where he spent his week ends. At a later date the plaintiff was placed in the care of Mr. A. Moore at Pailton Hall, near Rugby, where the provision for him, if proportionate to the payment made for it, was in the opinion of Dr. F. Bryan, who visited him in January, 1908, at the instance of the lunacy authorities, wholly inadequate and unsatisfactory, and where the treatment included the use of mechanical restraint and of drugs, stated to be chloral and hyoscine, in quantities sufficient to be injurious to the patient. One of the attendants employed was a groom or stable helper. The attention of the lunacy authorities had by this time been called to the case, and as a result of the inquiry held by a Master in Lunacy the plaintiff was placed under the care of Dr. Bryan, and since then had improved markedly in health. In the opinion of Dr. Bryan the treatment with drugs

to which the plaintiff had been subjected would have been likely to endanger his life if persevered in. It was stated by Mr. Harness that the treatment given by Mr. Moore, including the drugs used, was according to the recommendation of Dr. Krumbholz, whose instructions Mr. Moore followed. Mr. Moore was not called as a witness, and an application was made to the judge at the close of the evidence that he might be allowed to make a statement in view of what had been said with reference to him. Unfortunately his lordship was not able to permit this, but he referred in his judgment to the hardship of the circumstances in which Mr. Moore was thus placed. It may be observed that with regard to the gentlemen in whose care the plaintiff had been, and who gave evidence, it was not alleged that their treatment was other than proper and in accordance with the amount of the sum paid for the accommodation, board, and attendance arranged for on the plaintiff's behalf. In giving judgment Mr. Justice Swinfen Eady reviewed the evidence, laying stress upon that of Dr. Bryan as to the improvement in the lad's condition under his charge, and it should be stated that the arrangement sanctioned by the court with regard to this allowed the spending of an annual sum of £1700 for the plaintiff's maintenance. In reviewing the negotiations and arrangements entered into by Mr. Harness, his lordship held that it was not a question with him of what should be done in the boy's interest, but of economy. It was clear, he added, from the cross-examination of Mr. Harness, that the relatives of the boy had not been consulted with regard to his removal from Dr. Corner's home, and that a statement made by Mr. Harness in a letter to Dr. Corner to the effect that the relatives were agreed that he must be so removed, because the extra payments of £20 a month could not be afforded, was untrue. "It is quite impossible," his lordship said, "to read Mr. Harness's letters without seeing that the boy's welfare was the last consideration and economy the first." Mrs. Harness's statement that the boy was removed from Dr. Corner's care because Mr. and Mrs. Harness wanted him at home was, in his lordship's opinion, absolutely untrue. He expressed himself as satisfied with the evidence of the medical men with whom the plaintiff had resided, and where their evidence came into conflict with that of Mr. and Mrs. Harness he believed the former and not the latter. After referring in detail to the period spent at the house of Mr. Moore and to the fact that when it was telegraphed to the defendant to Norway that the lad was worse she did not return but only telegraphed back that he should be removed to an asylum, his lordship gave judgment in the plaintiff's favour. The issue to be determined was whether during the time involved he had been maintained in a reasonable and proper manner having regard to his position and means. His lordship was of the opinion that he had not been so maintained, and that Mrs. Harness had failed to discharge her duty as his guardian. He said a declaration would be granted to that effect, and also a declaration that the defendant was liable to account for £18,847 paid to her by the trustees between April, 1901, and August, 1907, when the plaintiff came of age, proper deductions to be made in respect of expenditure upon the education and maintenance of the plaintiff and his sister. The costs of the action he ordered to be paid by the defendant.

LITERARY INTELLIGENCE.—Mr. H. K. Lewis will publish almost immediately a new work dealing with the new organic arsenic compound "Diamino-dioxy-arseno-benzol," the famous "606," which is intended to provide in a handy and condensed form information not readily accessible elsewhere. Recent English and foreign literature on the subject is given. The writers are Mr. W. H. Martindale and Dr. W. W. Wynn Westcott, the well-known authors of the "Extra Pharmacopœia." The same firm has also just ready a monograph on "Meningitis, Sinus Thrombosis and Abscess of the Brain," by Dr. John Wyllie, author of "Tumours of the Cerebellum." The work contains appendices on Lumbar Puncture and Diseases of the Nasal Accessory Sinuses.—Messrs. Baillière, Tindall, and Cox inform us that they hope to publish early next year an English edition of Brünings's "Direkte Laryngoskopie," with some additional matter, bringing it right up to date, supplied by the author.

Public Health.

ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH.

The City of Nottingham.—Dr. Philip Boobbyer deals in his current annual report with the sanitary circumstances of a population of 263,441, the general death-rate of which for 1909 was 16·20 per 1000, while the birth-rate was 25·6 per 1000; the infantile mortality figure amounted to 150 per 1000 births. There has been a marked fall in the percentage of children successfully vaccinated within recent years, and in the first half of 1909 there were no fewer than 1728 certificates of exemption obtained as compared with 829 in the previous half year. As to any administrative methods Dr. Boobbyer observes that "conscientious objection as interpreted by the average objector is not only broadly farcical in itself but is rapidly reducing compulsory vaccination to something of the same order," and he adds that the gratuitous statutory provision for escaping vaccination is so simple that it is regarded by many persons as an authoritative encouragement to evade vaccination, a statement which is, in our opinion, quite a moderate one. Commenting upon the employment of diphtheria antitoxin Dr. Boobbyer refers to the large number of cases of diphtheria in which the use of this absolutely essential treatment has been neglected, and he states that cases are frequently sent into hospital which have received no serum, although the disease has been diagnosed for several days, and this notwithstanding the fact that the antitoxin is distributed gratuitously for the use of poor patients. The death-rate from enteric fever was 7 per 100,000, as compared with a rate of 3 for London and 6 in England and Wales generally. As is well known, Dr. Boobbyer attributes the excessive enteric fever death-rate of Nottingham largely to the persistence of the conservancy system of excrement disposal, and his annual reports for several years past contain some very instructive data upon this subject, as well as with reference to a high diarrhœa mortality, which is also attributed largely to the retention of the pail system. Writing upon the subject of tuberculosis, attention is directed to the provision in the grounds of the isolation hospital at Bagthorpe which is intended partly as an educational establishment and partly as a hospital. During 1909 the average stay of the patients was a little under three months, the weekly charge being 10*s.* 6*d.* One of the most interesting features in connexion with the Bagthorpe Hospital is the practice which has now obtained for some years of nursing cases of acute specific disease as far as practicable in the open air. Experience shows, Dr. Boobbyer is confident, that cases thus dealt with do better than in the ordinary wards and no untoward results have accrued. As regards what is known as the "barrier" system of treating cases of infectious disease—that is to say, the isolation or insulation of each patient's bed in a space by itself by means of a screen, cord, or tape—Dr. Boobbyer thinks that it is an excellent precaution against contact, which he regards as the principal means of infection, and as a method of impressing upon nurses and others the full meaning of physical isolation. He thinks, however, that the system is very difficult to carry out in its entirety with young patients of the poorer classes and with a limited nursing staff. In his opinion the open-air treatment above referred to is preferable, so much so that he is advocating the alteration of all the ward blocks so as to afford facilities for such treatment—i.e., the provision of an open verandah extending along the entire side of each ward block and communicating with the wards by French casement windows extending to the floor. The advantage of hospital accommodation for patients suffering from enteric fever is emphasised by Dr. Boobbyer, and we quite agree with him that it is rarely possible to properly nurse at home patients suffering from this disease. The Notification of Births Act, 1907, has been in force in Nottingham since May, 1908, and during 1909 there were 4900, or 73 per cent. of all the births registered, notified. It is, of course, provided by the Act that all births shall be notified, but the number above given includes all thosein which useful action can be taken by the sanitary authority. The number of certified midwives amounted in 1909 to 86, and of these 50 per cent. were engaged in active practice.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns 7347 births and 5617 deaths were registered during the week ending Nov. 26th. The annual rate of mortality in these towns, which had steadily increased in the four preceding weeks from 13·0 to 15·5 per 1000, further rose to 17·3 in the week under notice. During the first eight weeks of the current quarter the death-rate in these towns averaged 14·1 per 1000. In London the death-rate during the same period, calculated on the probably over-estimated population, was equal to 14·4 per 1000. Among the 77 towns the death-rates last week ranged from 7·8 in Wallasey, 9·0 in Hornsey, 9·2 in King's Norton, and 9·6 in West Hartlepool, to 23·8 in Stoke-on-Trent, 24·8 in Huddersfield, 26·3 in Middlesbrough, and 26·8 in Tynemouth. The 5617 deaths from all causes in the 77 towns last week showed a further increase of 577 on the numbers in recent weeks, and included 420 which were referred to the principal epidemic diseases, against 361, 392, and 403 in the three preceding weeks; of these 420 deaths, 192 resulted from measles, 67 from diarrhœa, 56 from whooping-cough, 54 from diphtheria, 26 from scarlet fever, and 25 from enteric fever, but not one from small-pox. The mean annual rate of mortality from these epidemic diseases in the 77 towns last week was equal to 1·3 per 1000, against 1·2 in each of the two preceding weeks. No death from any of these diseases was registered last week in East Ham, Walthamstow, South Shields, Preston, Hornsey, or St. Helens; the annual death-rates therefrom ranged upwards, however, to 3·9 in Rotherham, 4·7 in Tottenham, 5·4 in Plymouth, and 5·5 in Tynemouth. The fatal cases of measles in the 77 towns, which had been 101, 136, and 164 in the three preceding weeks, further rose last week to 192, and exceeded the number in any previous week of this year; they caused the highest annual rates, 2·3 in Brighton, 3·5 in Tottenham, 4·6 in Tynemouth, and 5·4 in Plymouth. The deaths attributed to diarrhœa, which had declined in the 12 preceding weeks from 527 to 75, further fell last week to 65, and were proportionally most numerous in Walsall. The deaths referred to diphtheria, which had been 54 and 55 in the two previous weeks, were again 54 last week; they included 16 in London and its suburban districts, 6 in Manchester and Salford, and 3 each in Swansea, Stoke-on-Trent, and Liverpool. The 56 fatal cases of whooping-cough showed a slight further increase upon recent weekly numbers, and caused annual rates equal to 1·2 in Norwich and 1·6 in Rotherham. The 26 deaths from scarlet fever were fewer by 7 than the number in the previous week; 3 occurred in Bury and 2 in Stoke-on-Trent. The deaths referred to enteric fever, which had been 32 and 21 in the two previous weeks, rose again last week to 25; they included 3 in Wigan, 3 in Manchester, and 2 each in Stoke-on-Trent and Blackburn. The number of scarlet fever patients under treatment in the Metropolitan Asylums and the London Fever Hospital, which had been 1882 and 1843 at the end of the two preceding weeks, had further declined to 1769 on Saturday last; 153 new cases of this disease were admitted to these hospitals during last week, against 239 and 180 in the two previous weeks. The 1810 deaths from all causes in London last week included 558 which were referred to pneumonia and other diseases of the respiratory system, against 246, 319, and 396 in the three preceding weeks, and exceeded by 185 the corrected average number in the corresponding week of the five years 1905–09. The causes of 48, or 0·9 per cent., of the deaths registered during last week in the 77 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified last week in Leeds, West Ham, Bradford, Newcastle-on-Tyne, and in 49 other smaller towns; the 48 uncertified causes of death in the 77 towns last week included 6 in Birmingham, 5 in Liverpool, 5 in Gateshead, and 3 each in St. Helen's, Manchester, Rochdale, and South Shields.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns 834 births and 600 deaths were registered during the week ending Nov. 26th. The annual rate of mortality in these towns, which had been equal to 13·3 and 16·2 per 1000 in the two preceding weeks, further rose to 16·5 in the week under notice. During the first eight weeks of the current quarter the death-rate in these eight towns averaged 14·1 per 1000, and corresponded with the mean rate during the same period in the 77 largest English towns. The annual death-rates in the eight Scotch towns last week ranged from 10·8 and 12·4 in Leith and Aberdeen, to 22·9 in Paisley and 26·6 in Perth. The 600 deaths from all causes in the eight towns last week showed a further increase of 12 upon the numbers in the two previous weeks, and included 55 which were referred to the principal epidemic diseases, against 47 and 61 in the two preceding weeks; of these 55 deaths, 15 resulted from diarrhœa, 14 from diphtheria, 12 from whooping-cough, 11 from scarlet fever, 2 from "fever," and 1 from measles, but not one from small-pox. The mean annual rate of mortality from these epidemic diseases in the eight towns last week was equal to 1·5 per 1000, and exceeded by 0·2 the rate from the same diseases in the 77 English towns. The deaths attributed to diarrhœa in the Scotch towns, which had been 17 and 24 in the two previous weeks, declined to 15 last week, of which 9 occurred in Glasgow and 2 both in Edinburgh and Greenock. The 14 fatal cases of diphtheria showed an increase of 6 upon the number in the previous week, and included 5 in Glasgow, 3 in Edinburgh, and 2 in Aberdeen. The 12 deaths from whooping-cough were within 1 of the number in the previous week; 8 were returned in Glasgow. The fatal cases of scarlet fever, which had been 6, 7, and 5 in the three preceding weeks, rose to 11 last week, of which 6 occurred in Glasgow and 4 in Dundee. The 2 deaths referred to "fever" and the fatal cases [of measles were recorded in Glasgow. The deaths referred to diseases of the respiratory system in the eight towns, which had been 65 and 121 in the two preceding weeks, further rose last week to 138, but were 160 below the number in the corresponding week of last year. The causes of 16, or 2·7 per cent., of the deaths in the eight towns last week were not certified or not stated; in the 77 English towns the proportion of uncertified causes of death last week did not exceed 0·9 per cent.

HEALTH OF IRISH TOWNS.

In 22 town districts of Ireland, having an estimated population of 1,151,790 persons, 529 births and 423 deaths were registered during the week ending Nov. 26th. The mean annual rate of mortality in these towns, which had been equal to 15·1, 16·2, and 17·9 per 1000 in the three preceding weeks, further rose to 19·1 in the week under notice. During the first eight weeks of the current quarter the annual death-rate in these Irish towns averaged 16·9 per 1000; the mean rate during the same period did not exceed 14·1 in the 77 largest English towns or 14·4 in the eight Scotch towns. The annual death-rate during last week was equal to 21·0 in Dublin, 17·9 in Belfast, 17·1 in Cork, 16·8 in Londonderry, 5·5 in Limerick, and 11·7 in Waterford; the mean annual death-rate last week in the 16 smallest of these Irish towns was equal to 24·1 per 1000. The 423 deaths from all causes in the 22 town districts last week showed a further increase of 27 upon the numbers in recent weeks, and included 29 which were referred to the principal epidemic diseases, against 27 and 18 in the two previous weeks; these 29 deaths were equal to an annual rate of 1·3 per 1000, corresponding with the mean rate from the same diseases last week in the 77 English towns, the rate in the eight Scotch towns being 1·5. The 29 deaths from these epidemic diseases in the Irish towns last week included 9 from whooping-cough, 8 from measles, 6 from diarrhœa, 3 from diphtheria, 2 from enteric fever, and 1 from scarlet fever, but not one from small-pox. The 8 fatal cases of measles showed a marked increase, and included 5 in Lurgan and 2 in Belfast. The 9 deaths from whooping-cough also showed an increase upon the numbers in recent weeks; 6 were recorded in Dublin. The 6 deaths attributed to diarrhœa, including 4 in Dublin, corresponded with the number in the previous week. Two of the 3 fatal cases of diphtheria and both the deaths referred to enteric fever were returned in Dublin. The death from scarlet fever occurred in Belfast. The deaths in the 22 towns last week included 100 which were referred to pneumonia and other diseases of the respiratory system, against 88 and 80 in the two preceding

weeks. The causes of 12, or 2·8 per cent., of the deaths registered last week in the Irish towns were not certified; in the 77 English towns the proportion of uncertified deaths last week did not exceed 0·9 per cent., and in the eight Scotch towns it was equal to 2·7 per cent.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following Surgeons have been promoted to the rank of Staff-Surgeon in His Majesty's Fleet (dated Nov. 21st, 1910):—Michael Joseph Laffan, Archibald Denizé Spalding, Alexander McCloy, Thomas Aubrey Smyth, Frederick Eustace Anley, Arthur Davidson, and Gerald Coneybeare Cross.

In accordance with the provisions of Order in Council of April 1st, 1881, the undermentioned officers have been placed on the Retired List:—Fleet-Surgeon Alfred Matthew Page, Surgeon William Hutcheson (dated Nov. 10th, 1910).

In accordance with the provisions of Order in Council of April 1st, 1881, Fleet-Surgeon Horace Ximenes Browne has been placed on the Retired List, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets (dated Nov. 24th, 1910).

Acting Surgeon Robert Nicholas William Walter Biddulph has been confirmed in the rank of Surgeon in His Majesty's Fleet (dated May 6th, 1910).

In accordance with the provisions of Order in Council of April 1st, 1881, Fleet-Surgeon George Alexander Stuart Bell has been placed on the Retired List at his own request (dated Nov. 29th, 1910).

ROYAL ARMY MEDICAL CORPS.

Colonel J. C. Culling, late senior medical officer at Bermuda, has taken over the appointment of Principal Medical Officer of the Western Command in succession to Colonel R. Porter, appointed Principal Medical Officer at Malta. Lieutenant-Colonel P. C. H. Gordon has been appointed to the charge of the Military Hospital and Senior Medical Officer of the Coast Defences at Pembroke Dock. Lieutenant-Colonel H. N. Thompson, D.S.O., commanding the Station Hospital at Lucknow, has been selected for increased rate of pay under Article 317 of the Royal Warrant. Major T. B. Beach has taken over duty in Egypt from the Aldershot Command. Major F. R. Buswell has left the London District for a tour of foreign service in India. The following officers have been appointed to the Irish Command for duty:—Captain R. C. Hallowes and Captain J. S. Pascoe from Cairo, Captain H. E. Gotelee from Ceylon, and Captain P. A. Lloyd Jones from Malta. Captain A. F. Carlyon, on the termination of his tour of service on the West Coast of Africa, has been posted to the Southern Command. Captain F. C. Lambert, from Wool Camp, has taken up duty at Cosham. Captain D. P. Johnstone has been transferred from Brackenbir Moor to Liverpool. Captain R. G. A. Tate has been appointed to the charge of the Sirhind Brigade Laboratory at Ambala. Captain W. M. B. Sparkes has joined for duty in Ireland, and has been posted to the Dublin District. Lieutenant A. T. J. McCreery, from Tidworth Park, has been posted to West Down North. Lieutenant S. McK. Saunders, from Woolwich, has embarked for a tour of foreign service in Egypt. Lieutenant W. E. Marshall has arrived home on leave from Egypt.

INDIAN MEDICAL SERVICE.

The Lieutenant-Governor of Burma has appointed Colonel H. St. Clair Carruthers, Officiating Inspector-General of Civil Hospitals, to be a Member of the Educational Syndicate in Burma in succession to Colonel W. G. King, C.I.E., who has resigned his appointment. Lieutenant-Colonel W. H. E. Woodwright, civil surgeon of Bareilly, has been appointed Medical Officer of the Central Prison at Bareilly during the absence on leave of Major C. B. Prall. Lieutenant-Colonel C. E. L. Gilbert has been granted eight months' leave home from India on medical certificate. Major J. Fisher, on return from leave, has been appointed under the Foreign Department of the Government of India to be Residency Surgeon at Jaipur in succession to Lieutenant-Colonel W. H. B. Robinson. Captain G. A. Jolly and Captain A. E. Roberts have arrived home on leave from India. Captain T. T. Owen, whose services hav been placed at the disposal of the Burma Government, has been appointed to officiate as Chemical Examiner and Bacteriologist at Rangoon, relieving Major F. N. Windsor, whose services have been replaced at the disposal of the Government of India. Captain A. H. Burgess has received three months' extension of his leave home from India. Captain H. R. Dutton has been appointed Civil Surgeon at Purnea. The services of Captain A. C. MacGilchrist have been replaced at the disposal of the Bengal Government. Captain W. H. Boalth has been appointed to the Substantive Medical Charge of the 104th Wellesley's Rifles. Captain F. N. White, on special duty under the Sanitary Commissioner with the Government of India, has been granted eight months' combined leave. Lieutenant G. G. Jolly has been appointed Specialist in Radiography and Electrical Science to the Fourth (Quetta) Division of the Southern Army.

TERRITORIAL FORCE.

Royal Army Medical Corps.

1st Home Counties Field Ambulance, Royal Army Medical Corps: Lieutenant Bertram C. A. Leeper resigns his commission (dated Nov. 26th, 1910).

Attached to Units other than Medical Units.—Lieutenant William E. F. Tinley to be Captain (dated Oct. 1st, 1910). Major Andrew P. Arnold resigns his commission (dated Nov. 26th, 1910). Lieutenant Frank M. Bingham resigns his commission (dated Nov. 26th, 1910).

For attachment to Units other than Medical Units.—Arthur Henry Falkner, late Lieutenant, 5th Battalion, The King's Own (Royal Lancaster Regiment), to be Lieutenant (dated Nov. 26th, 1910).

TERRITORIAL FORCE RESERVE.

Royal Army Medical Corps.

Captain Harry Armitage Robinson, from the Territorial Royal Army Medical Corps, to be Captain, with precedence as in the Territorial Force (dated Nov. 26th, 1910).

MEDICAL OFFICERS' SICK LEAVE.

The terms of Article 167 of the Pay Warrant, which prescribes that the sick leave up to 30 days which can be deducted from the calculation of the 61 days' leave allowed by Article 162, must only be in respect of the illness of an officer while actually at his station, have been modified subject to the condition that the employment of paid substitutes to any greater extent than is now contemplated must be avoided. General officers commanding will be at liberty to permit sick leave at whatever place the officer may be under treatment up to 30 days, if duly certified by a medical officer, not to count against the normal 61 days.

ASSOCIATION FOR PROMOTING THE TRAINING AND SUPPLY OF MIDWIVES.—A meeting of the council of the above association was held on Nov. 24th. Mrs. Samuel Bruce, who kindly lent her house for the occasion, occupied the chair. Mrs. Wallace Bruce, chairman of the executive committee, gave a short account of the work of the association during the year, and referred in particular to the Midwives (No. 2) Bill. She said there were two points upon which the executive committee of the association felt strongly—viz., Clause 12 (1) (*b*), which would permit a midwife qualified under regulations of the Local Government Board for Ireland to be entitled to be certified under the principal Act and to practise in England; and Clause 17, relating to the payment of doctors' fees. In the first case the committee considered that the clause should be omitted entirely, as it did not deal in any way with the regulation of midwives' practice in Ireland, for which a separate Bill was necessary, while it would allow a second standard of qualification for midwives practising in this country—a suggestion greatly deprecated by the association, as well as by a large majority of those who gave evidence on this point before the Departmental Committee in 1909. Miss Lucy Robinson gave an account of the training given under the auspices of the association and of the Training Home at East Ham. Miss Lorent Grant made a financial statement, and Mr. F. E. Fremantle, in a short speech, asked the members of the association to bear in mind that they wanted the Bill to pass without serious delay, and not be made a pivot or test question of Poor-law reform, but to be considered on its own merits. In conclusion, Lady St. Davids gave an address on the Organisation of District Nursing in South Wales.

Correspondence.

"Audi alteram partem."

THE QUALIFICATIONS FOR HOSPITAL APPOINTMENTS.

To the Editor of THE LANCET.

SIR,—It surely is an anomalous, if not paradoxical, position in hospital ethics that in connexion with two London hospitals advertisements should contemporaneously appear containing these conditions for candidates for positions on their staffs. The West London Hospital advertises for a physician who must be a Member of the Royal College of Physicians of London, though a member of the surgical staff may be a Fellow of the Irish or Scotch colleges. On the other hand, at West Ham the reverse of this holds good; the obligation does not apply to the medical, but only to the surgical staff. That is to say, the qualification which is good enough for the one in surgery is rejected by the other, and that that in medicine which is accepted by one hospital is ignored by the other.

At the recent dinner of the Irish Medical Schools and Graduates' Association Sir Alfred Keogh, ex-Director-General, A.M.S., spoke strongly on the absurdity of this anomaly, and an object-lesson was afforded on the same occasion, when among other distinguished Irish graduates and diplomates present were the Director-General of the Army Medical Department, the ex-Director-General, and Sir Thomas Gallwey, at present holding the chief command at Aldershot. It is not so long since the post of commandant at Netley Hospital was held by a distinguished Irishman, Sir Edmond Townsend, and successive principal medical officers in Egypt have been Irish graduates.

Anyone not in the secret as to the motives which animate hospital boards of management may be excused if in his ignorance he does not quite understand why the lives of His Majesty's sailors and soldiers are of less importance than the patients in public institutions in this country, or, to go even further than this, that His Majesty himself should be rash enough to trust his royal person during his tour throughout India, as Prince of Wales, to the custody of an Irish graduate, now one of his medical advisers—Sir Havelock Charles. Again, one is at a loss to explain how the present Governor-General of India has had all through his Viceroyalty another Irish graduate as his personal adviser.

I address this letter to THE LANCET, inasmuch as it has always taken a broad and liberal view on this question. It is to be hoped that the time is not far distant when an end will be put to such exclusiveness through the advent of a State licence which will entitle the holder to become a candidate for any public appointment in the United Kingdom.

I am, Sir, yours faithfully,

AN EX-PRESIDENT OF THE IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

London, Nov. 29th, 1910.

WHO IS HE?

To the Editor of THE LANCET.

SIR,—The excellent photograph which appeared under the above heading in Dr. Thomas Bushby's letter in THE LANCET of Nov. 26th enabled me at once to identify it as that of the bust of Thomas Waterhouse, which stands in the library of the Sheffield Medico-Chirurgical Society at the University of Sheffield. A short account of his life is given by the late Simeon Snell in the century history of the Sheffield Royal Infirmary,[1] from which I extract the following facts:—

Thomas Waterhouse was born in 1793, and commenced practice as a surgeon in 1816 at Sheffield. In 1820 he was elected one of the honorary surgeons to the infirmary. He took considerable interest in the establishment of the Medical School in 1828, and contributed £110 to the building fund. He also presented to the school his excellent collection of specimens of morbid anatomy, as well as books, &c. The late Sir James Risdon Bennett was at one time his pupil. He was also the senior of the two first honorary secretaries of the Sheffield Literary and Philosophical Society, founded in 1822 and still flourishing. He died of aneurysm of the aorta on April 8th, 1830, after having been previously operated on for aneurysms of both femoral arteries, by his friend, Mr. Hodgson of Birmingham. "Thus," says Snell, "a life of considerable promise was cut short at the early age of 36."

The following paragraph is copied from the eighth annual report of the Sheffield Literary and Philosophical Society, presented January, 1831:—

> The committee cannot omit to allude to the heavy loss sustained by the society in the death of one of its vice-presidents. The late Mr. Thomas Waterhouse had not only proved a valuable supporter of the institute in the several capacities of secretary, member of council, and contributor of papers, but is entitled to especial and honourable mention in this place as one of the founders of the society, who zealously took up the cause, when many were lukewarm or desponding, and perseveringly coöperated with heart and hands in its first establishment and subsequent proceedings.

It is of interest to add that the bust was executed in 1831 by the able young sculptor, Edward Law, brother of Dr. Joseph Law, who was for many years physician to both the General Infirmary and the Public Hospital and Dispensary, Sheffield, and whose portrait now hangs in close proximity to the marble bust of Thomas Waterhouse.

I am, Sir, yours faithfully,

R. J. PYE-SMITH,

Treasurer to the Sheffield Medico-Chirurgical Society.

Nov. 28th, 1910.

[1] Sheffield General Infirmary, now the Sheffield Royal Infirmary, 1797–1897: a Brief Sketch of a Century's Work, by John Daniel Leader, F.S.A., together with Reminiscences and Biographical Notices of the Medical Staff, by Simeon Snell, F.R.C.S. Ed. Sheffield, 1897.

THE MIAN MIR EXPERIMENTS.

To the Editor of THE LANCET.

SIR,—In your leading article of Oct. 26th dealing with a report by the committee appointed by the Government of India to inquire into results obtained by anti-malarial experiments at Mian Mir, you note that the subject has been one of controversy. That this is so is due to the fact that, under the influence of reputed failure in that locality of methods held to be of utility in other parts of the world, the Government of India has failed to make its local governments understand that the regarding of anti-malarial measures seriously would have its approval; and it goes without saying that in the absence of such declaration of policy no local government would consider itself safe in directing any appreciable part of its own funds, or those of local bodies under it, to this end. Hence there has occurred a paresis of efforts in a country which should, in the natural course of events, have been the first to reap the benefit of Ross's discovery. This condition of affairs has been received by the profession with yearly increasing surprise. The appointment of the committee was therefore a convenience of the usual official type—permitting of justification or, in its absence, the securing of the possibility of strategic retreat. The enquiry implied the entering into so great a mass of petty details that to have managed to inspect Mian Mir, examine witnesses, travel to and from Simla, and compile the report, in the short time allowed, must have left the committee little time to consider its conclusions; and it is certainly here that the weak point of its labours is evident.

In the face of knowledge that mosquito-reduction methods have elsewhere proved successful, and being of opinion that little if any results had been secured at Mian Mir, the committee has marshalled the local physical conditions as presenting unusual difficulties, and as all-sufficient reasons why success had not been attained. It has apparently assumed as unquestionable that efforts which it testifies to as energetic were also discreet and were correctly carried out; but seeing that these experiments were specifically of the nature of a test of the utility or inutility of methods which deeply concern the sanitary and economical condition of over 230,000,000 of the people of India, it would have been reasonable for the committee to have established their correctness. Hence, from the facts as recorded by the committee and experimenting officers respectively, I would invite attention to this aspect of the matter, as affording a simple solution of the differences of opinion which have arisen on this subject.

The experiments were inaugurated by the Royal Society in 1901 "to demonstrate the reduction of malaria in a cantonment by measures based upon the recent etiology of this disease." The officers of the expedition were Dr. Stephens

and (then) Mr. Christophers. Preliminary investigations by these officers occupied about six months. On their departure to England, Major James, I.M.S., was deputed by the Government of India to carry out the anti-malarial operations, and was in charge of this work from April, 1902, to July, 1903. He elected to follow certain dicta of Professor Ross, as gathered from his speeches and publications as to the advantage of "mosquito reduction." The quotations thus relied upon (pp. 6 and 7 of the Report) discuss applicability of methods, not in special, but in general, cases. The most definite of the quotations is as follows:—

> It is now a matter of the general experience of many investigators that where mosquitoes abound in a house, their larvæ can easily be found at a short distance, within a few hundred yards of the house. Occasionally, where the house is isolated, and no stagnant water is in its immediate vicinity, mosquitoes may attack it from a greater distance; but this is exceptional, and in the great majority of cases, especially in towns, almost every house breeds its own mosquitoes in its backyard, or in puddles or in drains in the streets close by.

Now the average mortal would think before making a *test* experiment that would take several months to work out, based on a statement of this general nature, the first step would be to ask the authority making it to define, as precisely as feasible, what is meant by "a few hundred yards" or "greater distance." No reference was, however, made to Professor Ross on the subject. Failing this mode of arriving at a basis, at least an independent determination of distance should have been arrived at, and, whatever that might be, in applying it to the area selected for operations it should have been observed without variation from the most external inhabited house of the groups of dwellings to be protected. In aid of arrival at this decision there were several records of observations in pre-Ross days as to distances of the "diffusion of malaria" that, by substitution of the mosquito for air, should at least have dictated caution. Indeed, in the year preceding these experiments, Celli had drawn attention in his book then published to observations by Ambrosi and Riva on this subject. Moreover, *previous* to inauguration of the Mian Mir operations, Stephens and Christophers, working in the Central Provinces, had arrived at the conclusion that the distance of a quarter of a mile was commonly, and half a mile was exceptionally, the flight of certain anopheles. Yet in attempting to explain his psychological attitude towards the Mian Mir controversy, his preference for quinine prophylaxis, and consequent absence of adequate anti-malarial measures in India, the Sanitary Commissioner with the Government of India, at p. 98 of his report for 1908, whilst placing stress upon the "few hundred yards" phrase and carefully ignoring the suggestion of "greater distance," would incorrectly desire it to be understood that this observation was not available for guidance in April, 1902, or July, 1903. But Major James, putting all such considerations aside, was content to select an area for mosquito reduction operations which itself had not equal sides ("one mile north and south and rather over ¾ mile east and west"), and the treated area round the habitations of which also was not equal. His limit, according to the committee, was drawn "close round the residential quarters, no attempt being made to deal with outlying uninhabited areas." Reference to the committee's map shows that this line abruptly excluded numerous pits and rain-fed depressions; and it becomes necessary to believe that whilst on the west he considered 40 yards of treated area would suffice for the protection of external dwellings, 200 and 260 yards were requisite on the east. The position of pits and rain-fed depressions, as shown on the map and described by the committee as still existing, certainly would not justify this differential treatment. Within this dubious area he proceeded to effect "mosquito reduction" operations—that is, by the abolition of pools, or by the making of them unfit by petrolage for breeding by mosquitoes in the "immediate vicinity" of houses (the prime point of danger as insisted by Ross), he brought about a condition equivalent to "no stagnant water" in the vicinity, well knowing that within a "few hundred yards" or "greater distance" there existed pools which might favour invasion from a distance. He therefore conspicuously failed to take due cognisance of the dicta which it is professed afforded him guidance. It is remarkable in contrast that Dr. Balfour,[1] in his excellent work at Khartoum, which has recently been eulogised by Lord Kitchener, found no similar difficulty in following Ross's meaning. Captain Christophers having returned from Europe in the Indian Medical Service, relieved Major James of duty at Mian Mir in July, 1903. He describes the area selected by Major James as "to a large extent isolated from the rest of the cantonment." Yet he held that a bazaar, 400 yards from the barracks within the protected portions, was an infective centre. As he held this opinion, it is difficult to understand the rigidity with which he excluded the Native Cavalry Lines and the East Infantry Lines which were within an additional 100 yards—that is, a total of 500 yards—of the most external of the dwellings to be protected. At the end of August he found that mosquitoes might invade from a distance of three-quarters of a mile, and then determined to enlarge Major James's area by three-quarters of a mile "in every direction." This would have been a logical sequence; but some error occurred in his measurements, as the text of his account of his labours, and a comparison of his map[2]—allowing for difference of scale—with that supplied by the committee, show that had such extension been carried out to the north, west, and east, not only would the lines mentioned have been included but the West Infantry Lines also. Both within and without these lines the possible breeding places for mosquitoes were very numerous, as shown by witnesses examined by the committee; and, indeed, up to date these have not been completely got rid of under Surgeon-General Hamilton's scheme. As a result, therefore, even the pools recognised by Captain Christophers as offering danger of invasion were not treated until the three months of the "fever season" (September, October, November) were actually at hand—a state of affairs that would not have precluded adult mosquitoes having already taken up their abode, with ample nourishment at disposal, within the various houses. Again, therefore, there was an absence of fixed ideas of procedure to be followed, or at least uniformity in method; and although doubtless interesting facts as to mosquito biology were gathered, the experiment was useless for the sanitary end originally desired by the Royal Society as defined above. Indeed, the methods were so lacking in uniformity that it is reasonable to believe that of the experimenting officers at least Major James (who was responsible for the inauguration and the longer conduct of the operations) was of opinion that Ross had pledged himself to the statement that, provided larvæ "close" to dwellings (again distances being undefined) were destroyed, no further precaution was required. It is, however, obvious that Ross made no such statement; and it extraordinary that, during the years of inaction which have followed these experiments, this simple fact has been lost sight of by a Sanitary Commissioner predisposed to "quinine prophylaxis"—a method which the committee frankly states "has not hitherto come within the range of practical politics." It is satisfactory to find that the committee whilst providing for those responsible for these experiments a strategic retreat, by adducing the physical conditions at Mian Mir as sufficing to account for the indifferent results secured, shows no disposition to deprecate "mosquito reduction" methods *per se;* on the opposite, it considers their addition to the present quinine prophylaxis policy would offer "great possibilities."

I am, Sir, yours faithfully,

W. G. KING, Colonel, I.M.S. (retired).

[1] Second Report Wellcome Research Laboratories, p. 21.

[2] Scientific Memoirs, Government of India, No. 9.

ACUTE MYELITIS AND ACUTE POLIOMYELITIS.

To the Editor of THE LANCET.

SIR,—With much of the article by Dr. Bastian on Thrombotic Softening of the Spinal Cord as a Cause of So-called "Acute Myelitis[1]" most observers will be in entire agreement, and in support of the view expressed I may mention the recent article on Acute Myelitis in Clifford Allbutt's "System of Medicine," Vol. VII., p. 645, 1910. With regard to acute poliomyelitis, however, I am afraid I cannot now agree with Dr. Bastian's view. All the recent work of Landsteiner, Popper, Levaditi, Flexner, and Lewis points to the fact that poliomyelitis is an infective disease giving rise to a lymphocytic infiltration of the tissues and walls of the vessels of the spinal cord. This perivascular exudation, though it may fall with special incidence on one portion of

[1] THE LANCET, Nov. 26th, 1910, p. 1531.

the cord, is not limited to a single area, but is of wide distribution. That this perivascular exudation may be so great as to give rise to obliteration of a vessel with the subsequent necrosis of the tissue, no one will deny. Having regard to recent epidemiological and experimental investigation, poliomyelitis must be considered as an infective process. I am perfectly prepared to admit that the evidence brought forward with regard to poliomyelitis during the past years has made me change the view I expressed in the article written in 1904, from which Dr. Bastian quotes.

I consider it most important that poliomyelitis, and with that I include encephalitis, should be regarded as an infective disease, and treated as such. I hope that the time when it will be made notifiable is not far distant, for it will only be by such means that we shall be able to eliminate from the community a disease which in its effects is so disastrous to the usefulness and happiness of many lives.

I am, Sir, yours faithfully,

Harley-street, Nov. 28th, 1910. FREDERICK E. BATTEN.

ULCERATING GRANULOMA OF THE PUDENDA A PROTOZOAL DISEASE.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Oct. 15th, there is an interesting article by Captain R. Markham Carter, I.M.S., on this subject. He describes as protozoa the bodies found in such cases by Donovan in Madras, as will be seen on comparing his descriptions and drawings with those published in the fourth edition (1907) of Manson's "Tropical Diseases."

It is of considerable importance that a careful search for Donovan's parasites should be made in the places in South America and the West Indies where the disease—misnamed "ulcerating granuloma"—is prevalent, as proof is required of the identity of the diseases so described in different parts of the world. In preserved material from British Guiana I have not been able to find these bodies.

I am, Sir, yours faithfully,

Welbeck-street, W., Nov. 28th, 1910. C. W. DANIELS.

FRACTURES IN THE NEIGHBOURHOOD OF JOINTS.

To the Editor of THE LANCET.

SIR,—As a simple surgeon in a colliery district I beg to express my thanks to Mr. Robert Jones for his timely paper on Fractures near Joints, and my obligation to THE LANCET for putting it within my reach. Surgery has recently made such strides and introduced such innovations that the general practitioner can only await their trial and sentence by those whose position and experience entitle them to pronounce definite opinions upon which he can securely work.

In the first place the scaphoid fractures interested me, as my "paternal Erichsen" and my more modern acquaintance, "Rose and Carless," left me to find my own courses here; and the method of reduction of Colles's fracture by a specialist is useful and important knowledge. The treatment of shoulder and elbow injuries is much at variance with old-established practice, but it appears to be thoroughly rational if empirical, and an increased range of aseptic surgery warrants an increased range of treatment. The importance of massage and the proper time for using passive movement required more definite directions *ex cathedrâ*—the way Mr. Jones "saved the situation" for Drs. A and B deserves all commendation.

The frequency and importance of fractures in children about the hip is fortunately and carefully dwelt upon. Who of us has not on sundry occasions made his second examination in trepidation? Again, the change in method of treating fractures at the lower end of the femur is very marked and, verified by experience, cannot be too strongly urged on those in, or going into, practice, whilst injuries in the neighbourhood of the ankle-joint have to be confronted often, and it is well to bear in mind the possibilities with regard to their occurrence and consequence.

In conclusion, I for one thank Mr. Jones for his lucid and comprehensive paper and for the interest and help I have gathered from it.

I am, Sir, yours faithfully,

Blackrod, Nov. 23rd, 1910. J. GOOD, M.R.C.S Eng.

MALINGERING IN THE ARMY.

To the Editor of THE LANCET.

SIR,—I observe in THE LANCET of Nov. 26th that a paper was read at the meeting of the United Services Medical Society by Major C. E. Pollock, R.A.M.C., on the above subject, and possibly it may be of interest if I mention some actual experiences of my own in this respect. It was in the year 1897, in July as far as I remember, when in charge of the Station Hospital at Up Park Camp, Jamaica. On going the round of the wards for the first time there were five cases under observation for epilepsy, all among negro soldiers of the West India Regiment. It immediately struck me as an unusual number, and to the young medical officer in immediate charge of the cases I expressed my doubts, but he assured me that he was quite certain of three of the number. A few days after, as I was seeing the morning sick, I heard a great commotion in one of the wards, and on proceeding there found one of the three on the floor in one of his fits. Careful observation convinced me it was not genuine, and I so reported to the senior medical officer. He instructed me to act accordingly, so after observing all the cases for a fortnight I discharged to duty the one I had actually seen in the fit.

A few days after, whilst at lunch at the mess, an urgent message was delivered to me to the effect that a prisoner at the cells was in a fit. I went over to the cells at once and there saw the man I had discharged lying on his cot in a fit. Feeling sure of my ground, I asked the sergeant to get me a little cayenne pepper. He brought me a handful, but I selected two or three particles only and placed them on the lower palpebral conjunctiva of the eye nearest to me. The effect was electric, and though apparently quite insensible the man jumped out of bed with the expression, "My King!" Before leaving I told him I would be on duty for the week, and that I could always cure his fits in that way. Next day I promptly discharged the other four. There was no more epilepsy during the time I remained at Up Park Camp; at least no epidemics of the spurious kind.

We discovered afterwards that these soldiers had been attending a sort of school of instruction at Kingston. The school not paying, broke up, and there was an end of the matter.

I am, Sir, yours faithfully,

J. D. RECKITT, M.D., M.R.C.S., L.S.A., &c.,
Lieutenant-Colonel, R.A.M.C. (Ret.).

London, Nov. 28th, 1910.

THE ORIGIN OF THE SOCIETY OF APOTHECARIES.

To the Editor of THE LANCET.

SIR,—In the report which occurs in THE LANCET of Nov. 26th of the dinner given by the Worshipful Society of Apothecaries to the Lord Mayor and Sheriffs of London on Nov. 22nd your reporter has mistaken the historical allusions of the Lord Mayor when proposing "The Health of the Worshipful Master." You report his lordship as saying "in its early days the society included in its livery grocers, who, however, objected to associating their business with drugs, and so they founded a company of their own." I was present at the dinner. What the Lord Mayor did say was in accordance with the facts, which are just the other way about, the Society of Apothecaries having been formed from the Grocers' Company.

The first corporate body of which we know anything was the Gild of Pepperers which came into existence without a licence, and is mentioned in the Pipe Roll of 1179–80, and which was allied with the Spicers. This Guild ultimately fell into difficulties, and in 1345 some Pepperers founded a new fraternity of Pepperers, which was to include Pepperers of Soper's-lane and Spicers of the ward of Cheap, as well as other members of these two trades or mysteries who dealt in peppers, spices, and drugs. In 1373 the name Grocer was first applied to this Company.

In 1428 the first charter was granted by Henry VI. to the Company of Grocers. In 1562 "the Apothecaries" are spoken of as "Freemen of the Company"—i.e., Grocers. In 1607 the third charter of the Company of Grocers included the Grocers and Apothecaries as one incorporate body. In 1615 the Apothecaries petitioned the King

for a separate incorporation, which was granted in 1617. This was part of a general movement of the time to separate callings which bordered on professions from those which were trades—e.g., the Scriveners and the Musicians; although the Surgeons were not successful in getting separated from the Barbers until much later, in 1745. In 1701 a case was carried on appeal to the House of Lords *re* a Mr. Rose, which settled once and for all that an apothecary was able legally to practise medicine, and that he was entitled to visit and prescribe for a patient as well as prepare medicine for his treatment.

Since that date an apothecary in England has been a qualified medical practitioner, and for nearly two centuries the bulk of the general practice of the country was in his hands.—I am, Sir, yours faithfully,

THOMAS CARR, M.D. Durh.,
A Liveryman of the Worshipful Society of Apothecaries.

Blackpool, Nov. 26th, 1910.

BRITISH MEDICAL BENEVOLENT FUND: SUPPORT URGENTLY NEEDED.

To the Editor of THE LANCET.

SIR,—At the last meeting of the committee I had to report that the grant account on the bank was overdrawn to the extent of £250. In spite of this the committee had to deal with so many and distressing applications that the sum of £300 more was voted, with the result that the deficit now amounts to about £550. Fortunately we have been able so far to meet these demands out of the reserves accumulated at the time of our special appeal two years ago. There is now but little more left, and unless further supplies are quickly forthcoming it will be necessary to refuse help to many deserving cases, and that at the time of year when help is most needed and applications most numerous. We spend all we have, but we cannot spend what we have not got.

I appeal, therefore, to members of the profession to come to the support of the Fund and save it from the pain and reproach of having to refuse relief for want of means. Subscriptions and donations may be sent to me. *Bis dat qui cito dat.*—I am, Sir, yours faithfully,

SAMUEL WEST, M.D. Oxon.,
Honorary Treasurer, British Medical Benevolent Fund.

15, Wimpole-street, London, W.

"606."

To the Editor of THE LANCET.

SIR,—We beg to inform you that we are placing the "Ehrlich-Hata" arsenic compound dioxydiamidoarsenobenzol, generally known as "606," on the market about the middle of December next, under the denomination "Salvarsan."

As it is absolutely impossible for us to answer personally all the inquiries which medical men are sending us daily from all parts of the United Kingdom, we should esteem it a great favour if you would extend the hospitality of your esteemed journal to these lines in order that the above fact may be made known to all your readers. Thanking you in advance,—We remain, Sir, yours truly,

Pro MEISTER, LUCIUS, AND BRÜNING, LTD.,
ERNEST SCHOLL.

London, E.C., Nov. 28th, 1910.

PSORIASIS FROM A BACTERIOLOGICAL POINT OF VIEW.

To the Editor of THE LANCET.

SIR,—I have read with interest Dr. Serrell Cooke's note on this subject, published in last week's number of THE LANCET. On looking through my microscopic sections I find bodies in the so-called epidermal abscesses of psoriasis which I now think are the stumpy bacilli which he has found so constantly in his recent investigations.

I must congratulate both Dr. Cooke and Mr. Garner (the bacteriologist at St. John's Hospital) on their labours, which seem so promising. That I am prepared for the parasitic theory of psoriasis to be proved will be seen from the following abstract of my remarks made in the discussion on psoriasis at the Manchester meeting of the British Medical Association, published in the *British Medical Journal* of Oct. 25th, 1902, p. 1332:—

> Dr. Eddowes thought that they had not got to the end of staining methods, from which they might still expect much without surrendering the position to chemistry. He had found in a case of psoriasis (guttata) a spindle-shaped organism in a sebaceous gland and large micrococci in the mouth of the related hair follicle which formed the centre of the early efflorescence. He taught that *pityriasis rubra* did not become superadded to psoriasis, but that one passed into the other gradually. Psoriasis and pityriasis were closely related. The conditions could change from one to the other.

I am, Sir, yours faithfully,

ALFRED EDDOWES, M.D. Edin.

Wimpole-street, W., Nov. 29th, 1910.

ROYAL SOCIETY OF MEDICINE: ELECTRO-THERAPEUTICAL SECTION.

To the Editor of THE LANCET.

SIR,—In your issue of Oct. 29th last, p. 1319, under the heading "Röntgen Society," it is stated that this society is "the parent society of the Electro-Therapeutical Section of the Royal Society of Medicine."

At the request of the council of this section we are writing to ask if you will kindly contradict this statement. The Röntgen Society, consisting largely of lay members, was founded to study the physical side of the Röntgen rays, and is in no way a medical society. The British Electro Therapeutic Society was founded shortly afterwards to study the medical aspects and was a purely medical society. It is this society which was the parent of the Electro-Therapeutical Section of the Royal Society of Medicine.

We are, Sir, yours faithfully,

REGINALD MORTON,
G. HARRISON ORTON, } Honorary Secretaries.

Nov. 22nd, 1910.

SURGICAL INSTRUMENTS AND HOSPITAL PATIENTS.

To the Editor of THE LANCET.

SIR,—The question of the supply of surgical instruments and appliances is one that presses heavily on all societies dealing with the relief of the sick poor, and as a contributor and worker in connexion with one or two of such bodies I should be grateful if you would allow me space in your columns to put some aspects of this matter before the "profession."

The position of any person or society that is asked to contribute funds for the supply of a surgical instrument is one of some difficulty. As "lay persons" we are incompetent to criticise the decisions of the surgeon, and our business as charitable agents is to carry out his instructions and to act on the supposition that all expenditure ordered is essential. It is clear that any other attitude would be quite impossible and inevitably lead to most undesirable friction. But a great responsibility on this very account is thus laid upon the surgeon, for it depends upon him whether the circumstances of the family and the degree of benefit to be derived from the instrument are taken into account or whether it is ordered irrespective of any such considerations.

Do surgeons realise that this responsibility is theirs? Many of them certainly do, and experience has probably shown these that appliances suitable to wealthy patients, where every aid to remedy defect is desirable, are not always justifiable for the poor. Instruments given free are too often carelessly used and quickly destroyed, or even never worn at all; but when patients are too poor to pay even a small proportion of the cost themselves they have to be so provided, and it is the business of charity to find the money somehow. Wherever possible, however, patients should be asked to pay a little in proportion to their means, and I would submit that we are justified in asking those who prescribe to bear in mind that it is not only the wealthy and charitable public who are called upon to put their hands in their pockets, but in almost every case the patients themselves who have to share the cost and incur a debt which, in addition to the many other expenses of illness, they can often ill afford, and which should not be put upon them unless absolutely necessary.

I am, Sir, yours faithfully,

SOCIAL WORKER.

Nov. 22nd, 1910.

THE GERMAN ANTI-QUACKERY BILL.

(FROM A SPECIAL CORRESPONDENT.)

PRACTICALLY coincident with the publication by the British Privy Council of the Blue-book on unqualified medical practice comes the news from Germany that, after years of agitation and many ineffectual attempts to deal with this thorny subject, the field of activity of the quack and the sale of secret remedies is about to be placed on an established legal basis by a uniform law throughout the whole of the German Empire. The Bill of "a law against abuses in the healing *trade*" has received the sanction of the Federal Council, and is now before the Reichstag, after it has been before the health boards of the various States and discussed by the public for no less than two and a half years.

Scope of the Bill.

At present there are no restrictions in the German Empire regarding the practice of medicine; any person may try his prentice hand in curing others, only he may not assume any title or otherwise give rise to the belief that he is the holder of a qualification, and the pharmacists are forbidden to sell a number of drugs except when prescribed by qualified practitioners. Of course, the lay healer has to be particularly careful not to come in conflict with the many laws which deal severely with errors caused by culpable neglect or want of proper knowledge, and the recent proceedings by the State procurators against quacks have been based mostly on the latter, particularly on the law regarding the causation of bodily injury by culpable negligence. In the introduction to the new law, it is distinctly stated that it is not in the Government's intention to return to the former condition of restricted medical practice: "Any law forbidding the practice of medicine by any but qualified persons would only tend to make the quacks work more in secret and therefore less open to control; it is the secrecy in the business of a quack that in the eyes of the public surrounds it with a halo of mystery and promotes the business and prestige of the quack." The present Bill tries to strike the golden medium, and is intended to give the authorities a weapon to take more stringent measures, when necessary, against certain individuals.

The law under discussion will regulate the quack's business to a certain extent. Every person desirous of treating ailments or bodily defects in man or beast as a *trade* (it is interesting to note that they are distinctly designated as "traders") must, before opening his business, in writing inform the local authorities of his intention and give full particulars concerning his education, former occupation, and life. He will be required to keep books as other traders, which will be open to inspection, and he will be obliged to give full information, when required, regarding his methods of treatment. The licensed quack is forbidden to treat by letter, to adopt mystic practices, hypnotism, or use other than purely local anæsthetics. He is forbidden to treat infectious diseases which are dangerous to the whole community, *including cancer* (this is new). The Federal Council will be empowered to forbid the treatment at its discretion of certain ailments in man or beast, as well as the use of any particular mode of treatment. Permission to continue the exercise of a quack's trade may be withdrawn by the authorities whenever they have grounds to believe that the public health is being endangered or the life of animals jeopardised by his methods or when his clients are being exploited by swindling practices.

In view of the practically universal complaints about a falling birth-rate, it is of interest to note that by this law the Federal Council will be empowered to forbid entirely or to restrict the sale of appliances to prevent conception or induce abortion. The quack will be forbidden to supply medicine or appliances, or to instruct his clients to obtain the same from certain persons. An extremely wise provision has been included which makes it possible to forbid the sale of any infants' food or other "foods" if their use is likely to prove injurious to health, or if they are marketed in such a way as to deceive and exploit the public. The quack who makes publicly false statements regarding cures, or who attempts to deceive his clients by false statements as to the value or effects of the procedures he recommends will be liable to one year's imprisonment and a fine of £250, or either of these penalties alone.

To assist the Federal Council in the execution of this law the Chancellor will appoint a commission consisting of members of the Imperial Board of Health, appointed for a period of five years. Persons who wish to appeal against a decision of the Federal Council will be given an occasion of defending their aspect of the case before this commission of experts on the whole subject.

Measures as to Advertisements of Secret Remedies.

In dealing with the traffic in secret remedies the new law lays the axe at its principal support—advertisement. The proposal, often advanced, that the Government should examine every secret preparation before it is allowed to be placed on the market has been dropped; it would, it is stated, imply a certain guarantee of its virtue and value and thereby throw too great a responsibility on the authorities. On the other hand, the Federal Council will have the power to forbid the sale and importation of any preparations, the unrestricted sale of which is likely to prove detrimental to the public health or pocket. However, the principal attack is to be delivered against the advertisements of manufacturers of secret remedies. The measures to be adopted are, from a British point of view so accustomed to the prominent display in the daily press of the supernatural virtues of Somebody's Pills, very drastic; it will be a punishable offence to make any untruthful statements regarding the value, effects, origin, or composition of any remedies or appliances advertised to the public; and, this is the main point in the whole measure, it will be forbidden to distribute or bring to the public notice any testimonials, recommendations, expressions of thanks from clients, opinions of experts, and similar statements regarding any secret remedy. It will also be forbidden to circumvent the above provision by drawing attention to articles contained in books or pamphlets bearing in any way on the preparation. If this were applied in Great Britain, what a different aspect would the morning paper not assume. No more grateful patients "given up by the doctors," no more pictures to form a gallery of the "saved from death's door," who have incidentally contributed to the country's finances.

Present Position of Quackery in Germany.

In conjunction with the above Bill some remarks on the present position of quackery in Germany may prove interesting. The number of quacks in "practice" in Germany can only be estimated, as there is at present no special legislation requiring them to report their trade to the authorities. It is, however, assumed that the total is not wide of 15,000 persons engaged in this lucrative undertaking. That it is a very good paying business has come out in the course of several trials during the past years in which a quack has played the rôle of protagonist. The renowned shepherd, Ast, received about 500 patients daily—in fact, at certain hours of the day the trains were crowded with his "patients." Not to be forgotten is the extensive treatment by correspondence also indulged in. One quack was so overrun with patients that he found it necessary to introduce an automatic machine; the client placed in the machine a 10 pfennig piece (1½*d.*) and received a ticket with a number on it denoting his turn to appear before the gifted healer.

As regards the income derived by these quacks, the trials in which they have figured, and also some collisions with the income-tax authorities, yield a picture of the value of an "unqualified practice." We find mention made of annual incomes of £12,000, £6000, £5000 "at least," £3000 annually during 15 years, down to a mere £40 a month. What is the most surprising aspect of the whole question, and which is especially brought into prominence by the authorities, is the fact that even the poorest will find means to pay for the services of a quack, and in all cases that have come to light the fee of the quack is considerably above that of the qualified practitioner. The average fee was found to range between 3*s.* to 5*s.*, for a consultation by letter 5*s.*, while others are made to pay a deposit of several pounds, for which they will be treated for a certain time. Some extraordinarily high sums have been paid to quacks for a single course of treatment, usually ending disastrously for the patient.

THE SOUTH AFRICAN MEDICAL CONGRESS.

(FROM A SPECIAL CORRESPONDENT.)

THE Twelfth South African Medical Congress assembled in Cape Town on Oct. 31st and remained in session until Nov. 5th. There had been considerable doubt as to the wisdom of the local organising committee in arranging for Congress to meet at a time when all sections of the South African public were enjoying the festivities arranged in connexion with the opening of the new Union Parliament. Events proved, however, that these doubts were not justified, for not only was there a record attendance at Congress, but much really good work was got through in spite of many social functions to which members were invited.

As readers of THE LANCET may remember, attention in a recent number[1] was directed to the fact that public health matters in South Africa were not receiving due recognition from those in authority, and that the only strong health department in the Union—namely, that of Cape Colony—had been abolished instead of being taken as the model from which a proper health department for the Union could be evolved.

Sir Kendal Franks of Johannesburg has earned the gratitude of the profession in South Africa by visiting the larger centres and endeavouring to bring the different medical societies into line so that the Union Government could be approached; and so that the views of the profession in regard to the administration of public health and other matters of general interest could be urged upon its attention. During Congress Sir Kendal Franks's labours were crowned with success, for delegates from each medical association met and agreed to the following resolutions, which were carried unanimously through Congress with instructions to the Standing Committee to see that they were brought prominently before the Government:—

1. That a portfolio of Public Health be created, to be held, if need be, in combination with some other portfolio.
2. That a medical officer of health for South Africa be appointed, who shall be directly responsible to the Minister, and be the sole administrative head of his department. That he be a qualified expert in his department, and that his actions shall be confined to public health matters.
3. That a Medical Council for the union shall be created which shall be chiefly elective, and shall have control over the admission to the practice of medicine, of dentistry, of midwifery, and of nursing, and shall have control of the discipline of these professions.
4. That upon any change of policy on medical questions other than those of public health, or upon any question affecting the status of the profession, the Medical Council shall be consulted.
5. That there shall be an adequate representation of medical men on all boards and committees which have to do with the establishment, maintenance, and management of hospitals under the Provincial Councils.

The importance of these resolutions needs no emphasising, Stating as they do the unanimous desires of medical men in South Africa, and can the Government be induced to act upon them they will stand as *the* most important feature of this Congress. The need for a Minister of Public Health and a properly organised department was referred to repeatedly throughout the Congress—at the official opening ceremony by H.R.H. the Duke of Connaught, in the able presidential address by Dr. C. F. K. Murray, at the banquet by Sir Kendal Franks, and in several papers and discussions arising therefrom, particularly in the Public Health Section. It is to be hoped that with the profession united, as it is for the first time on these matters, the Government will see fit to accede to its wishes, and if not steps are likely to be taken to have the resolutions brought to the notice of Parliament.

Resolutions Nos. 3 and 4 are also of great importance to the profession, for hitherto the elective element in the four Medical Councils of the different provinces has not been sufficiently strong, and it is hoped that the unified Medical Council may consist principally of elected members. Moreover, in practice, it has never hitherto been the custom of the different Governments to seek the advice of the Medical Councils on matters of vital interest to the profession as a whole, but they have usually sought advice from medical men in Parliament or outside who in no sense could be said to represent the profession. The fifth resolution is of importance in the Transvaal alone, for in the other provinces the medical staffs of hospitals have as a rule been adequately represented on hospital boards.

A number of other resolutions were passed by Congress, but those I have mentioned are considered to be of vital interest in South Africa, and will be pressed on the Government by every legitimate means available. It is understood that they will be accorded the support of the Opposition and a small section of the Government party, should it be necessary to bring the matter actually into the political arena.

The papers read at the Congress were generally of a higher scientific value than at former South African Congresses, and though it is invidious to mention any paper where so many are of special merit, the paper on Paratyphoid Fevers in South Africa, by Major J. G. McNaught, R.A.M.C., is worthy of particular attention. A *résumé* of the papers will be published in book form shortly as "Transactions of Congress." The attendance at Congress numbered 129.

[1] THE LANCET, Sept. 17th, 1910, p. 897.

THE ROYAL SOCIETY OF MEDICINE

THE annual dinner of the Royal Society of Medicine was held at the Connaught Rooms of the Freemasons' Hall, London, on Nov. 29th, the President, Sir Henry Morris, being in the chair. A very large and representative gathering assembled at the dinner, and among the numerous guests were the Lord Mayor of London, Lord Ilkeston, Lord Blyth, Sir Thomas Barlow, Sir W. S. Church, Sir Francis Champneys, Sir James Reid, Sir James Porter, Alderman Sir T. Crosby, Sir A. Pearce Gould, Lord Justice Fletcher Moulton, Mr. Justice Lush, Sir Joseph Dimsdale, Sir Almeric FitzRoy, Sir Richard Douglas Powell, Sir W. Treloar, Dr. C. Theodore Williams, Mr. Charters J. Symonds, Mr. Whitaker Thompson (chairman of the London County Council), Professor M. J. M. Hill (the Vice-Chancellor of the University of London), Mr. Cowell the secretary, and Mr. Victor Plarr librarian, of the Royal College of Surgeons of England, and Dr. Squire Sprigge (the Editor of THE LANCET).

Sir JOSEPH DIMSDALE, in proposing the toast of "The Society," said they owed much to science, and still more to medical men who devoted themselves to finding out the mysteries of the human body. He then sketched the history of the Royal Society of Medicine, and showed how world-wide its influence was. Its members, he said, now numbered 3300. Mr. Macalister found 800 members when he joined the society, and had worked it up to its present prosperous condition. Sir Joseph Dimsdale concluded by wishing success to the new building of the society's premises.

Sir HENRY MORRIS, in replying to the toast, described the services rendered by Sir William Church to the amalgamation of the various medical societies into the Royal Society of Medicine, and explained that the council of the society had acquired the new site in Henrietta-street for the purpose of erecting new premises because the society had outgrown the accommodation required. Sir Henry Morris's speech was an eloquent exposition of the good that could be done by a great medical society, and was obviously intended to arouse that feeling in the medical profession.

After a brief interval, which was occupied by an interesting display of blood pathology through the cinematograph, the toast of "The Guests" was happily proposed by Sir R. DOUGLAS POWELL and acknowledged by the LORD MAYOR of LONDON, Lord Justice FLETCHER MOULTON, and Sir THOMAS BARLOW.

DONATIONS AND BEQUESTS.—The late Mr. Henry Andrade Harben of Newland Park, Chalfont St. Giles, chairman of the Prudential Assurance Company, Limited, has bequeathed £1000 for the endowment of a bed in St. Mary's Hospital, Paddington, £1000 for the Medical School of that hospital, and £500 to Queen Charlotte's Lying-in Hospital.—The Glasgow Western Infirmary has received an anonymous gift of £3500 for the purpose of providing an operating theatre in the new wing.—The Royal Dental Hospital, Leicester-square, London, has received £100 from Mr. R. McWhirter, as trustee of the estate of the late Mrs. Adelaide Roberts.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The University.

THE annual Huxley lecture was delivered on Nov. 23rd by Professor Percy Gardner of Oxford, who took for his subject "Rationalism and Science in Relation to Social Movements."—The returns of the number of new students show that 25 have entered for the full medical course and 10 for the dental course. Last year there were 24 medical students and 10 dental students. A significant fact is that of the 25 new medical students this session 17 are men and 8 women. This is a considerable increase in the number of women students.—The annual medical dinner will take place on Dec. 6th. The chair will be occupied by Dr. T. S. Short, physician to the General Hospital, and the principal guest will be Lord Ilkeston, consulting physician to the General Hospital.

Hospital for Skin and Urinary Diseases.

An electrical plant for the treatment of lupus, cancer, and other skin diseases was first installed in this hospital nine years ago, but owing to the growth in the importance of the department and the increase of patients it has been necessary from time to time to enlarge the accommodation. A new and well-equipped department has now been constructed in the basement of the building at a cost of £2000. The plant installed includes three complete sets of X ray apparatus for purely therapeutic work, these being capable of adjustment to give varying qualities of Crookes tube emanations. A shield consisting of a sheet of lead a quarter of an inch in thickness and perforated in one place is interposed between the patient and the tube. The operators are shielded behind screens lined with sheet lead and furnished with windows of thick lead glass. There are Finsen-Reyn and Lortet-Genoud lamps, and the high-frequency apparatus is by Gaiffe of Paris, and is the most powerful of its kind. For rapid radiographs and diagnostic purposes a coil is provided capable of taking a current of from 60 to 70 ampères at 220 volts. Electrolysis and ionisation are other forms of electrical treatment provided, and there is also a room for complete bacteriological and chemical examinations. The department is under the control of Mr. A. A. Russell Green.

Nov. 29th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Royal Southern Hospital: New Out-patient Department.

AN extensive and important addition to the Royal Southern Hospital was inaugurated on Nov. 21st, when Mrs. Adamson, wife of Mr. William Adamson (the president of the hospital committee) opened the new out-patient department, which at considerable expense, has been erected in Caryl-street, opposite the hospital proper. For many years past the old out-patient department—which dates back to the opening of the restored hospital in 1872—has been altogether inadequate for the requirements of the district in which the Royal Southern Hospital operates. That district has now a population of about 340,000 persons. The fact that the old out-patient department has overgrown its resources, as proved by the attendances having increased from 12,500 in 1873 to 45,000 last year, argues the necessity for further out-patient accommodation. Some 20 years ago the committee took steps to raise funds for the purpose of acquiring the site facing the hospital in Caryl-street. This was successfully accomplished and the property purchased, although further exertions on the part of the committee to provide for a building fund met with little response. In 1907, however, the corporation, in compliance with an application from the honorary treasurer of the hospital, obtained parliamentary powers to make a grant of £4000 towards the cost of the new scheme. The civic gift stimulated the generosity of the citizens, who quickly subscribed a sum of £4500, which represented the additional amount required to cover the cost of the building. The new out-patient department is substantially built and of pleasing appearance. Externally the building is of red Ruabon brick with Portland stone dressings, the two central pieces in the front elevation being surmounted with stone finials. A large, well-lighted and well-ventilated central waiting-room, planned to accommodate 200 persons, is approached by two entrances—one for patients and the other for the staff. A semicircular plastered ceiling, free from projections of any sort, effectually prevents the harbouring of dust. This hygienic principle, in fact, has been closely observed throughout the building. On the south side stands the isolation-room with a separate exit to the street, a surgical dressing-room, three consulting-rooms, and a room containing foot and air baths. Similar accommodation is afforded on the north side, with the substitution of a dental-room for the isolation-room. Retiring-rooms and lavatories for the medical staff and nurses and a dispensary are situated on the east side. On the west side are to be found an operating-theatre with a recovery-room adjoining, in addition to a dark room for eye, throat, and nose examinations, and a consulting-room for those special departments. A well-lighted and airy basement provides another waiting-room, around which are situated an X ray room, a developing-room, and the skin department, with consulting- and bath-rooms, a massage- and exercise-room, and a plaster-bandage room. Here also is placed the inoculation department, with a splint-room and a cryotherapy, or freezing, room. The foot and arm baths represent quite a recent addition to hospital plant, and will be of great utility in facilitating the removal of old dressings. The opening ceremony was attended by the Lord Mayor and Lady Mayoress and a large concourse of citizens.

Diplomas in Tropical Medicine; Support from the University of Liverpool; Continued Prosperity of the University.

The memorial presented at the opening of the session of the General Medical Council advocating the recognition of the Diploma of Tropical Medicine as an additional registrable qualification was signed by Sir Rubert Boyce (the Dean of the Liverpool School of Tropical Medicine), Professor Ronald Ross, Dr. J. W. W. Stephens, Mr. R. Newstead, Dr. W. T. Prout, C.M.G., Dr. J. L. Todd (late director of the Runcorn Research Laboratories of the Liverpool School of Tropical Medicine), Dr. Charles J. Macalister, and Dr. William Carter (emeritus professor of materia medica at the University of Liverpool). The pro-Chancellor of the University, presiding over the annual meeting of the University Court of Governors, held in the Town-hall on Nov. 26th, spoke of the continuance of the University's prosperity alike as to the number of students, the number of new chairs, and the advancing standard of work required. He also laid stress on the broadening of the scope of the work of the University, as evidenced by the Tropical School of Medicine, the Town-planning Department, and the School of Social Service, and appealed for £3000 necessary to modernise the equipment of the Department of Electro-technics. The Lord Mayor, the Lord Bishop, Sir William Forwood, Sir Edward Russell, and others testified to the valued services of the University.

Nov. 29th.

BRISTOL AND THE WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

University of Bristol: Opening of the New Wing.

AT the opening of the new wing of the University by Lord Winterstoke, Pro-Chancellor of the University, the proceedings began in the large hall of the University, where the Bishop of Bristol conducted a short service. Then came two admirable speeches by Lord Winterstoke and Dr. T. Herbert Warren, Master of Magdalen College, Oxford, and till recently Vice-Chancellor of Oxford University. The former gave a most interesting retrospect of the progress of higher education in Bristol as he had known it in his lifetime, and a forecast of the place which the modern universities are destined to fill in our national life. Dr. Warren's eloquent tribute to the virtues of Bristol, his native city, contained among others the penetrating idea that a modern university founded in an ancient and historic city should cultivate in some measure that spirit of tradition which in the older University had proved itself so powerful an educational force, as well as the practical and utilitarian point of view which characterises the modern Universities.

After these addresses most of the company moved in a procession through University-road and Woodland-road to the main entrance of the new wing; the chairman and members of the University council were preceded by the bedells, with their staves of ebony and silver, and followed by the Lord Mayor and corporation of Bristol, the master and wardens of the Society of Merchant Venturers, and the Senate and staff of the University. At the same time Lord Winterstoke, the Bishop of Bristol, the treasurer, and certain of the guests, preceded by the mace, passed through the corridors from the old into the new building. The outside procession having reached the door the Lord Mayor gave a short address, in which he exhorted the undergraduates to be worthy of their University, and then the Right Hon. Lewis Fry knocked three times on the door, which was opened from within by Lord Winterstoke with a silver key suitably inscribed. The procession then entered the building to inspect it.

The University Conversazione.

On the same evening the new buildings which were opened in the afternoon were exhibited to about 1500 guests at a conversazione.[1] Happily the weather was fine, and the guests were able to pass into the reception hall where they were received by the Right Hon. Lewis Fry, Sir Isambard and Lady Owen, and others, without the discomforts of dampness which at one time threatened. So many things were on view that it was impossible for anyone to see everything; but by means of ingeniously planned routes, indicated by arrows of different colours on the walls, everyone was directed to those exhibits in which he was specially interested. Among the most striking of these were the tele-photographic apparatus, the action of which was demonstrated by the inventor, Mr. T. Thorne Baker. A tele-writer apparatus in action was also shown. Captain F. P. Mackie, I.M.S., an old Bristol student and a member of the Sleeping Sickness Commission for Uganda, lectured on his travels, with many lantern illustrations; and Professor A. F. Stanley Kent gave a demonstration of high frequency currents. In another room there was a "Sahara scene" arranged to show various kinds of desert vegetation, while the small hall of the University was filled with Antarctic curios brought back by the Shackleton Expedition. It would be impossible to catalogue all the minor attractions of the conversazione, but two or three were of special interest to medical visitors, among them a most ingenious demonstration of the part played by flies as carriers of disease, and a graphic demonstration of the electrical variations in the active human heart by means of Einthoven's string galvanometer. No efforts had been spared to make the evening successful, and everyone carried away a very pleasant impression of the new wing and its great possibilities.

A Colston Chair for the University of Bristol.

A letter has appeared in the Bristol papers above the signatures of the Vice-Chancellor and those of the president and treasurer of the Bristol University Colston Society. This society has for some years contributed large sums to the funds, first of University College and now of the University. The letter was published on the Colston anniversary, on which certain charitable societies founded in memory of the great Bristol philanthropist, Edward Colston, commemorate his birthday by banquets (two of which, the Anchor and the Dolphin banquets, have a political importance). As the writers point out, it is not just to the memory of Colston to honour his name by means of charities only, for of his own very large donations to various public projects more than half was devoted to the furtherance of education. They ask that the present annual contribution of about £450 which their society makes to the University funds shall be raised by addition of new subscriptions to £1000, that a sum adequate for the maintenance of a "Colston chair" may be provided.

Bequests to Charities.

The Bristol papers announce that the late Dr. C. W. Belfield, formerly of Old Market-street, Bristol, has left the following legacies among others: to the Bristol General Hospital, £5000; to the Bristol Royal Infirmary, £100; and to the Bristol Eye Hospital, £100.

Nov. 29th.

[1] We are publishing a description of these buildings in a later issue.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Representation of Aberdeen and Glasgow Universities.

A MEETING of the Executive Committee of the Aberdeen University Liberal Association was held on Nov. 25th, when it was unanimously agreed—

That it having been intimated that Professor Ogston is willing to stand as an independent candidate in the interests of science and education, the members of the Executive Committee of the Aberdeen University Liberal Association, recognising his unique qualifications as a University representative, are of opinion that it is not expedient to bring forward a candidate at this election.

Professor Ogston has, however, written stating that he does not intend to offer himself as a candidate for Parliamentary honours. In a letter to Professor J. A. Thomson Professor Ogston sets out the reasons which have weighed most with him in resolving at present to abstain from seeking to represent the joint constituency. He writes: "Throughout the country the present political crisis is arousing an unusual strength of partisanship, which will compel most voters to select that candidate who will most determinedly resist the side which that voter opposes, and candidates like myself, in favour of moderate measures, will have far less prospect of favourable consideration than has been the case in any General Election within my memory. Had time sufficed for representing to the constituencies the advantages moderation offers in solving the crucial problems before the country, and especially of explaining the increasing importance to our Universities of having the interests of science, education, letters, and research regarded as the main object of their chosen Member's activities, there might have been a prospect of success for one holding such views as I. But no energy and work can possibly accomplish this, to even a moderate degree, in the available time, and the defeat of such a candidate as I should have striven to be would be a foregone conclusion. The effort would be wasted, and what is more momentous, the defeat would tell in any future contest on any candidate holding like views. I feel assured that consideration will give to these reasons a cogency they may not, at first sight, seem to possess, and that it is in the real interest of the universities that I should not stand as an independent candidate at present. There are, in addition, domestic reasons that I need not detail which have much weighed with me in forming my resolution. I can only further say that I feel a gratitude beyond my power to put into words that I should have been thought of by you and others who love our universities in connexion with their membership."

Dundee Royal Infirmary Staff and the Time-Gun.

On account of the objections taken by the staff of Dundee Royal Infirmary, the charge in the time-gun has been reduced from 4 pounds to 2½ pounds, but still the infirmary officials are not satisfied. The works committee of the Town Council has decided, however, to continue the smaller charge meantime.

Anatomical Society of Great Britain and Ireland.

At the annual general meeting of the members of the above society, held on Nov. 25th at Guy's Hospital, London, Professor Robert W. Reid, professor of anatomy in the University of Aberdeen, was elected President for the ensuing year, and his senior assistant, Dr. Alexander Low, was elected Scottish secretary of the society.

Nov. 29th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Health and the Primary Schools.

THE insanitary condition of many of the Irish primary schools has often been the subject of criticism, for many of the schools are overcrowded, and heating, ventilation, and water-closet accommodation are insufficient. It is now some years since the Irish Government made a promise to provide funds to aid in remedying this state of affairs, but so far the Treasury has failed to make the promise good. No one can defend the present state of the

school buildings. In an address delivered last week Professor Barnes, professor of agriculture in Trinity College, Dublin, commented on certain other factors of school life which act adversely on the health of the children. The minimum school age in Ireland is three years. It is no uncommon thing for infants of 3 and 4 years in Ireland to be led to school, where they have to sit for long hours, possibly in wet clothes and perhaps hungry. As a rule, no attempt is made to teach them anything but "to sit quiet," which, as Professor Barnes rightly says, is the very thing nature wishes them not to do. He maintains also that the school hours are too long. For five hours or more of the best of the day the children are deprived of fresh air and sunshine—the two great enemies of disease. There can be little doubt, as Professor Barnes says, that these factors, working on the childhood of Ireland, are responsible for that weakening of the stamina which keeps the tuberculosis rate so high in the country.

Recent Government Appointments.

Some criticism has been roused by the appointment of a medical member of the General Prisons Board, Ireland, recorded recently in THE LANCET (Nov. 12th, p. 1451). The criticism is not based on personal grounds, but on the fact that a member of the Prisons Service has not been selected. Since the prisons were taken over by the Government in 1878 all the successive medical members of the Prisons Board, with one exception, have been Local Government Board inspectors, and none of them have had any previous knowledge of prison work or of criminology. There are many medical men of high standing employed as prison surgeons, and it is not clear why promotion to the General Prisons Board has not come their way. In contrast to this is the practice in the Local Government Board, where two recent appointments of medical inspector have been given to gentlemen with experience of the Poor-law service. One of them, Mr. C. J. MacCormack of Athlone, had been for some 30 years a dispensary medical officer, and the other, Dr. Brian O'Brien of Belfast, had formerly been in the dispensary service and latterly a police surgeon.

The Royal Academical Institution, Belfast.

This old school—at which so many North of Ireland men have received their early education—had a series of centenary celebrations last week, one of which was specially enjoyable, the dinner given on Nov. 22nd, in the City Hall, by the Lord Mayor of Belfast (Mr. R. J. McMordie), who is himself an old Academical. Among the speakers were Sir Samuel Dill, Sir Joseph Larmor, Sir Almroth Wright, and Sir John Byers, all old pupils of this famous school. A centenary volume, giving the story of the school, its foundation, and history from 1810 to 1910, is shortly to be published.

Workhouse Dispensary Relief: Abuse of the Grant in Lisburn.

At the weekly meeting of the Lisburn board of guardians held on Nov. 22nd, Dr. D. C. Campbell, medical officer of the Lisburn dispensary district, reported that medical lines were being issued by wardens or guardians to persons who certainly were not entitled to dispensary relief, and who, from their position, were well able to pay for the attendance of a medical practitioner. On looking over his books he found that before his appointment the average annual issue of lines was 1500, whereas now—and the year was not closed—he had received 2100. He also instanced receiving several tickets a short time ago which were issued in the name of a local guardian, and every one of them was illegal, not being signed by the guardian himself. After a discussion the report of a committee was adopted giving the dispensary committee the power of the board of guardians to cancel tickets of the description given, so as to enable the medical officer to recover costs in the petty sessions and expose such persons through the press.

Nov. 29th.

THE National Food Reform Association are asking Parliamentary candidates for support in the effort to combat physical degeneracy by securing the standardisation of bread, the passing of a Pure Milk Bill, and a Bill dealing with patent medicines, the improvement of the teaching of cookery, and so on. Information may be obtained by sending a stamped addressed envelope to the secretary, 178, St. Stephen's House, Westminster, London, S.W.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Malta Fever Contracted in a Laboratory.

AT a meeting of the Academy of Medicine held on Nov. 15th M. F. Widal, M. Cotoni, and M. Kindberg remarked that goat's milk was the chief, but not the only means of propagating Malta fever. The slightest contact with the Micrococcus melitensis was sufficient to communicate the disease. This microbe was one of the most dangerous to those who had occasion to perform manipulations with it, and there have already been many instances of laboratory infection in countries where the disease prevailed. This misfortune had recently happened in Paris to a man who attended to the cultures in the laboratory of the three bacteriologists above mentioned. The disease followed its ordinary course with "undulating" pyrexia, profuse perspiration, and sharp pains of a myalgic character. The diagnosis was confirmed by the recognition of the Micrococcus melitensis in the blood and urine, as well as by the reactions of agglutination and fixation. Such instances of laboratory infection showed how easily Malta fever might be contracted anywhere and made evident the necessity of precautionary measures. As the agglutination reaction was commonly employed in laboratories for the diagnosis of the disease, it would be advisable to have recourse to cultures killed by the vapour of formol. M. Widal said that as Malta fever was increasing of late years in France the prevention of it ought to engage the attention of the sanitary authorities. It was necessary to make the public understand that the milk of goats should be boiled and that regulations should be made with respect to the importation of the animals. He, moreover, recommended that Malta fever should be made notifiable, as the bacteriological diagnosis of it and the method of transmission were fully known.

Cancer of the Lower Lip treated by Electro-coagulation.

Speaking at the Society of Medical Radiology and Electrotherapeutics recently, M. Fauchie-Villeplée described three cases of cancer of the lower lip which were successfully treated each at a single sitting in the practitioner's consulting-room, and without any subsequent interruption of the patients' ordinary occupations. The operations were performed under local anæsthesia by means of cocaine; deep cicatrisation took place rapidly, and only a very small scar was left. The observations were still too recent for the formation of an opinion as to the ultimate results, but from the point of view of the immediate results, electro-coagulation seemed to present several advantages. For the surgeon the operation was an easy one and did not require much apparatus, while for the patient it was a boon that only a single application was necessary and that little, if anything, had to be done in the way of previous preparation or subsequent attention. Radiotherapy, on the other hand, required several sittings. Surgical excision was not only more complicated than electro-coagulation but required the application of dressings and caused much greater loss of substance.

Ambulatory Treatment of Fracture of the Leg.

At a meeting of the Surgical Society held on Nov. 16th M. Routier presented a report on 15 cases of fracture of the leg treated on the ambulatory system by means of Delbet's apparatus. The cases were communicated to M. Routier by M. Schmid, who said that the results were excellent, both the reduction of the fractures and the retention of the bones in position being quite satisfactory. In some instances there was swelling which necessitated a modification of the apparatus. The duration of the treatment seemed to be shorter than usual, and on the removal of the apparatus the muscles showed no atrophy, neither had the integuments suffered in any way.

Appointment at the Faculty of Medicine.

At the general meeting of the Faculty of Medicine which was held on Nov. 24th Professor Landouzy was recommended for re-election as dean; out of a total of 59 votes 57 were given in his favour.

Treatment of Talipes Equino-varus.

At a meeting of the Pediatric Society held on Nov. 15th M. Jalaguier and M. Lamy showed a child who had suffered

from talipes equino-varus and had been operated on, by *évidement* of the astragalus, an operation which, of course, did not dispense with the necessity for the post-operative measures which were employed in orthopædic surgery. The operation was an easy one, and by far the least serious of those which were applicable to the bones of the foot; it might even be performed on a suckling infant. The loss of blood was insignificant, and risk of infection was avoided by the smallness of the incision in the skin and the absence of any thread or catgut. The correction of the malformation was perfect, no subsequent shortening of the foot occurred, and the tibio-tarsal movements were preserved.

Nov. 28th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Avoidance of Pluralism in Hospital Appointments.

BY a recent change of policy in the making of appointments to private hospitals, a very welcome opportunity of using their knowledge for the public benefit is being given to the large number of *privat-docenten* living in this city. This new departure has for its aim the prevention of multiple holding of offices in hospitals. Hitherto in private charitable institutions the same man has very often filled two similar or even dissimilar appointments, and it has not been uncommon for a professor to occupy the position of consultant for some specialty or other in four or five different institutions, whilst hundreds of *privat-docenten* were condemned to comparative idleness. Now these hospitals have made it a rule to apportion such appointments—they are all honorary only—between two or more of the younger men; this will also hold good in the hospitals conducted by religious corporations, so that in a few years a number of the younger and more active scientific workers will have their appointments. Hitherto, even the posts of specialists for the working men's sick clubs and similar friendly societies have often been the object of cumulation. These appointments, too (they are, of course, not purely honorary, but carry some remuneration with them), will in future be given preferably to comparatively young men not yet holding any other similar post. In that respect the outlook for the better qualified men in Vienna is improving.

Proposed New Regulations for the Management of Hospitals and Public Charities.

The independence of the hospital staff will be seriously interfered with if some new legislative proposals should become law. The circumstances are that the political party now in power in Lower Austria is endeavouring to get into its hands the entire control of the public charitable institutions, including the hospitals and university clinics, under the pretext of financial consolidation of the bankrupt Hospital Fund. The latter fund is utterly inadequate and suffers from a chronic deficit, for which hitherto no remedy has been found, because neither the financial department of the State, nor that of the Empire, nor the municipalities, are willing to take over the indebtedness of the fund amounting to some 16 million kronen (£700,000). A scheme has now been worked out by the financial experts of the ruling party, which would not only provide the money necessary to pay off the debts, but would also ensure working capital for all the hospitals in Vienna and Lower Austria. The scheme necessitates a new tax of 5 per cent. upon all the rates and taxes levied hitherto throughout the area in question—no pleasant news for the public. It would also provide for all these institutions a governing body, which would contain, amongst 32 members, two medical men as representatives of the medical profession. The past history of this political party does not warrant the expectation that it will give considerate treatment to scientific and other medical requirements, and the hospital staff would be at the mercy of an official appointed by the governing body, whereas at present medical influence is nearly paramount in the great majority of hospitals here. It is also intended to introduce the system of whole-time hospital appointments whereby the holders of these positions would be bound never to take up private practice. In this way young medical men would be practically debarred from acquiring hospital experience before settling down in private practice, which would be a very undesirable prospect. Nevertheless, there is great danger that the Bill to this effect will be passed even if without those clauses which are simply impossible; in any case the effect which it would produce upon the medical profession would be so deleterious that a strenuous opposition is being already organised.

"606."

The great interest excited by Professor Ehrlich's discovery of the powerful microbicide termed "606" has been well illustrated in a discussion on its use, which took place quite recently in the Vienna Gesellschaft der Aerzte. The balance of opinion was evidently favourable to the new remedy, although several unpleasant temporary symptoms have been caused by it. For instance, acute neuritis of the vestibular nerve has been observed by Beck and slight pyrexia and malaise by other medical men. Ullmann has found by radiographic investigations that the deposit produced in the tissues by the injection was still present in the third week, the inference being that an injection must not be repeated earlier. In the clinic of von Neusser the action of "606" upon spirilla and spirochætæ has been carefully studied, and it was found that for them the substance was a powerful germicide. The usual dose administered here is from 0·4 to 0·5 gramme (from 6 to 7½ grains), preferably in a neutral solution. It has been tried with good effect in initial stages of progressive paralysis and was very useful in the painful stage of incipient tabes dorsalis. A very interesting communication on this subject was made by Dr. Kobler of Bosnia. In that part of Austria syphilis is very common, but it is easily influenced by mercury and iodides. A systematic investigation has been instituted by the Austrian Government in this new province, and the entire population would in course of time be examined for syphilis. Up to the present date 650 syphilitic patients who had had no treatment have received injections of "606," and were being kept under observation. The experience of several eminent clinicians showed that this substance was, as a rule, more efficacious in the early stages of the disease than the old remedies, and that in inveterate refractory cases it sometimes acted wonderfully well, but that there were a good many cases in which mercury and iodide of potassium could not be dispensed with. Wassermann's reaction was often positive for three or four weeks after the injection of "606," and relapses have been observed in Vienna as early as two weeks after the injection. It was therefore more than probable that the present mode of administration was not yet the ideal one. All the speakers agreed that it was inadvisable to use this substance in advanced cases of meta-syphilitic (systemic) affections of the nerves, and that its exact position in the materia medica has not yet been ascertained.

Nov. 28th.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

Convalescent Soldiers.

THE following notification has been issued by the Army Department, Principal Medical Officer's Branch, Simla:—

The station selected for the transfer of weakly soldiers to India during the winter instead of sending them as invalids to England are: *Kasauli* and *Subathu* for the reception of cases from the 1st, 2nd, 3rd, 4th, 5th, 7th, and 8th Divisions (except the Presidency Brigade); *Lebong* for the reception of all cases in the Presidency Brigade and Burma; *Mount Abu* for the reception of all cases in the 5th Division, for which Kasauli is not considered suitable. *Ouramdhar* and *Khandhalla* for the reception of cases from the 6th Division; *Wellington* for the reception of cases in the 9th Division; *Karachi* for the reception of special cases from the 1st, 2nd, 3rd, 4th, and 7th Divisions. *Colaba* for the reception of special cases from the 9th Division. As regards the 4th Division, the men might in the first instance be interchanged between *Quetta* and *Karachi*, otherwise they should be sent to Kasauli.

The following stations have been reserved for enteric convalescents: Naini Tal for the reception of cases from the 1st, 2nd, 3rd, 4th, 7th, and 8th Divisions, and Jubbulpore, Jhansi, and Mhow. Wellington: An enteric convalescent depôt has been established for the 6th, 9th, and Burma Divisions and for Kamptee and Sitabuldi, also for Mhow and Jubbulpore when accommodation cannot be made available for convalescents at Naini Tal.

Report of the Chemical Examiner and Bacteriologist to the Government of Burma for 1909.

Major F. N. Windsor, chemical examiner and bacteriologist to the Government of Burma, in a report on the work carried out in his laboratories during 1909, shows that the number of articles examined by him has increased from 7274 in 1908 to 17,696 in the year under report. A great deal of the extra work thrown on the chemical examiner was caused by the large consignments of cocaine seized by the Excise Department, as the importation of this drug into British India and Burma has been forbidden except for medicinal purposes. The number of analyses made in the case of suspected human poisoning increased by 25 over the previous year, showing that crime of a nature requiring aid from the expert chemist for investigation is by no means decreasing in Burma. The number of cases connected with bloodshed increased by 57, and the articles by 103, while the percentage of detection was 51·4 as compared with 47·5 in 1908. The number of rape cases was 175, with a percentage of detection of 49·7. In the rainy season it is noted that any method of examining seminal stains frequently failed owing to bacteria invading and obliterating the spermatozoa. Major Windsor directs attention to the unfit condition of his laboratory for both chemical and bacteriological investigations, and Colonel W. G. King, C.I.E., I.M.S., late Inspector-General of Civil Hospitals in Burma, in his covering letter forwarding the report to the Secretary of the Government of Burma, expresses an opinion that the small sum of Rs. 25,000 which it is proposed to allot will be insufficient for the requirements of a laboratory worthy of the province.

Nov. 5th.

Obituary.

ANGELO MOSSO.

THE Senator Angelo Mosso died on Nov. 24th in Turin, at the age of 64. Comparatively short as was his life, he played many parts in the domain of biology, and in all of them acquitted himself with a skill and an address that explain the sense of loss which scientific Italy is feeling to-day. One of a gifted family, he enrolled as a student of medicine in the university of his native Turin, and, after a brilliant graduation, he entered the medico-military service. In this capacity he attended post-graduate courses at sister seats of learning, first in Italy, where for two years he worked with Moriz Schiff, then holding the chair of physiology in Florence, and afterwards in Germany, where he was a diligent student under Ludwig of Leipsic. Thence he proceeded to Paris, and returned in 1876 to Turin, an accomplished physiologist, with special knowledge of the virtues and action of drugs. His Alma Mater, on the strength of this, installed him in the chair of Materia Medica. With the aid of the government and the "Consorzio Universitario" he established in connexion with this professorship the first laboratory of pharmacology in Italy—an initiative since followed up in the sister schools. When Jakob Moleschott, the illustrious biologist and physiological chemist who, under the auspices of Cavour, rehabilitated the scientific bases of medical study in Italy, was transferred from Turin to Rome, Angelo Mosso was chosen to replace him in the Turinese chair—a choice more than justified by the ability with which he maintained the traditions of his Dutch predecessor. His prelections came to be the most frequented of the Subalpine School, and relays of students passed through his hands to fill posts of trust in the biological sciences throughout academic Italy. Honours of many kinds now came to him. He was elected Rector Magnificus of his Alma Mater and communal councillor for the city, in which capacity he did invaluable work in public hygiene and education. A favourite at Court, he was made in rapid succession Commendatore of SS. Maurice and Lazarus, Commendatore of the Crown of Italy, and decorated with the Cross of the Legion of Honour; while as Senator of the kingdom he showed himself an enlightened legislator, particularly in those questions, hygienic and educational, in which he had given such evidence of proficiency in his native city. Scientific distinction also fell to his lot in ample measure. He was a Member of the Academia dei Lincei of Rome (which corresponds to the British Royal Society), and also of a long list of learned bodies, Italian and foreign—the Imperial Society of Berlin having, indeed, elected him Corresponding Fellow only a few days before his death.

Master of a ready pen, he contributed largely and effectively to the literature of his favourite subjects, first on the action of tartar emetic, then on that of chloral, followed by monographs, "Sulle Irritazioni del Cervello," and, not less original and illuminating, "Sul Modo di Scrivere i Movimenti dei Vasi Sanguigni" ("On the Mode of Recording the Movements of the Blood-vessels"), "Sulla Attività Diastolica del Cuore" ("On the Diastolic Activity of the Heart"), and "Sul Modo di Scrivere i Movimenti del Cervello nell' Uomo" ("On the Mode of Recording the Movements of the Brain in Man"). This last work, coupled with his invention of the "strumento misuratore" (measuring instrument) enables us to compute the time, the duration, the degree of a sensation from without transmitted to the brain in the most diverse ways. On the strength of this he rose to the front rank of Italian physiologists and obtained the prize of 10,000 francs awarded for original research by the Accademia dei Lincei. On the lines of this work he published most interesting and suggestive monographs on Sleep, in its physiological and hygienic aspects, to say nothing of treatises on Respiration, on the Movements of the Intestine, on the Systemic Circulation, on the Temperature of the Brain, on the Apparent Death of the Heart, on Respiration in Tunnels, on the Ptomaines, as well as the widely diffused *opuscules* addressed *ad populum* on "Fear" and on "Fatigue."

One great achievement of his busy life was the foundation of the Institute for Nature Study on the Monte Olen, some 9000 feet above sea-level, in which he was loyally aided by brother scientists, Italian and foreign, and also by the subsidies of the home and continental governments. It was in 1905 that, together with a few of his class assistants, he worked at the "Capanna Margherita" (the hut called after the Queen Dowager of Italy, an enthusiastic mountaineer) and carried out his researches on the phenomena of respiration at altitudes above the snow-line. From this took origin the institute, now open for some ten weeks of the last summer and early autumn to nature-students of such nationalities as have subsidised it, and described in THE LANCET of Sept. 4th, 1909, p. 730. Already it has amply rewarded its originator and his coadjutors by the observations taken, classified, and put on record by its *personnel* on zoology, mineralogy, botany, meteorology, and, indeed, on every subject of scientific interest in the Alpine world. It will indeed be the true monument and, in a sense, the mausoleum of Angelo Mosso—a "point of pilgrimage" to succeeding generations of students, compatriot and continental, colonial and trans-Atlantic, intent on doing homage to the mentally gifted and philanthropically inspired investigator, teacher, and counsellor, whose death all Italy and, with her, the brotherhood of science are now mourning.

Professor Mosso's health had been showing signs of deterioration for some years back. A spinal affection had been partially overcome by relaxation of indoor work, only to be succeeded by symptoms of diabetes which still further curtailed the hours spent in the laboratory and indicated the open-air life to which he accordingly devoted himself. Even in these conditions his scientific and eudcational interests found congenial scope. He became, as his colleagues dubbed him, the "Apostle of Physical Exercise," inuring the academic youth to athletic games mainly on English lines and founding football clubs which have already given a good account of themselves "at the goals." The distraction of foreign travel, also prescribed, opened up to him a new field for investigation, and visits to Crete and Sicily fructified in admirable monographs on the treasure-trove of the pre-historic ages. But by this time the intense activity of mind and body was beginning to tell—"the sword was visibly wearing out the scabbard"—and the last few weeks saw him a prostrate invalid, loyally and lovingly attended by all that was most skilful and experienced of the Subalpine School. Gradually the faculties became blunted and the brain ceased to respond, till, on the morning of the 24th, his bed surrounded by his family and his more intimate colleagues,

he succumbed to what the medical bulletin affixed to the University gates calls "œdema cerebrale, originato da intossicazione diabetica." No more imposing funeral than that which closed "the last scene of all" has for many a year been witnessed in Turin, and the *oraisons funèbres*, eloquent and impressive as they were, conveyed but inadequately the sense of bereavement with which all Italians, from the King to the humblest of his subjects, are now mourning Angelo Mosso, "gone over to the majority."

THOMAS FRANCIS SPITTAL CAVERHILL, M.B., C.M. EDIN., F.R.C.P. EDIN.

THE death of Dr. T. F. S. Caverhill of Edinburgh took place at his brother's house at Jedburgh on Nov. 4th. For nearly a year he had been in failing health and unable to undertake active work, but it was not thought that his death would take place so soon. Born at Crichness, in the heart of the Lammermoors, he was the bearer of an ancient Scottish border name. He received his medical education at Edinburgh, where he graduated M.B., C.M. in 1878. In 1882 he was admitted a Member of the Royal College of Physicians of Edinburgh, becoming a Fellow in the following year. He was a resident physician and a resident surgeon of the Royal Infirmary and of the Royal Maternity Hospital, Edinburgh. Later he was physician of the New Town Dispensary and surgeon of the Eye Dispensary, Edinburgh.

For many years Dr. Caverhill was medical officer of health of the county of Haddington. He was greatly interested in army medical matters and held the rank of Surgeon-Colonel in the Lothian and Berwick Imperial Yeomanry. His sympathies for wounded cavalry soldiers were aroused by some public remarks of General Drury-Lowe on the cruel and apparently unavoidable hardships endured in long and rapid cavalry marches through a hostile country during the Egyptian campaign. After many experiments he evolved the mounted ambulance scheme for cavalry wounded, which was favourably commented on by H.R.H. the late Duke of Cambridge. Some of our readers may have witnessed the interesting display of Dr. Caverhill's Mounted Ambulance Company at the Military Tournament in the "eighties."

He was a vigorous advocate of the open-air treatment of pulmonary tuberculosis, and did much to further the "crusade against consumption" in Scotland. He established at his own expense the Manor Valley Sanatorium at Caverhill near Peebles, so that those who could not afford the usual rates of a private expensive sanatorium could, for a moderate fee, secure proper treatment there. With characteristic generosity he often went a step further and dispensed with fees altogether in necessitous cases. He held the traditional high ideals of the profession and constantly went out of his way to relieve other than physical miseries which so often are brought under the eye of a medical practitioner who enjoys the confidence of his patients, and was accordingly beloved to no ordinary degree.

Dr. Caverhill was a lover of all that related to Scottish lore and character, and gathered together a rare collection of prints of Mary Queen of Scots, of her contemporaries, and of her times. The prints being carefully chosen and arranged, form in themselves an interesting history of that remarkable queen. In Dr. Caverhill the medical profession has lost not only an able exponent of our science, but an exceptionally cultivated man, generous, public-spirited, and well-informed.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. N. Manolesco, formerly clinical professor of ophthalmology in Bucharest.—Dr. Gagnière, *professeur agrégé* in the Medical Faculty of the University of Montpellier.—Dr. Hugo Behrens, a German medical officer who wrote a number of novels under the *nom de plume* B. Renz. He was 90 years of age.—Dr. Baynes Walker, formerly professor of medicine at the Woman's Medical College of Pennsylvania in Philadelphia.

PROPOSED COTTAGE HOSPITAL FOR ST. AUSTELL.—About £1500 have now been raised towards the erection of the proposed cottage hospital for St. Austell. The institution is much needed for the district, and it is hoped that the work will shortly be commenced.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the subjects indicated:—

Surgery.—H. E. Battle (Sections I. and II.), Leeds and University College Hospital; C. B. Davies (Sections I. and II.), Manchester; E. B. Keen (Section II.), Charing Cross Hospital; J. M. Moll (Sections I. and II.), Utrecht and St. Bartholomew's Hospital; W. H. Parkinson (Sections I. and II.), Manchester; and C. J. Thompson (Sections I. and II.), Birmingham.
Medicine.—E. G. Brisco-Owen (Section I.), Cardiff and Royal Free Hospital; A. Cordon (Section II.), Birmingham; and C. B. Davies (Sections I. and II.), Manchester.
Forensic Medicine.—C. B. Davies, Manchester; C. W. Jenner, London Hospital; J. M. Moll, Utrecht and St. Bartholomew's Hospital; and A. J. V. Mathews, St. Mary's Hospital.
Midwifery.—C. B. Davies and W. H. Parkinson, Manchester.

The Diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery:—H. E. Battle, A. Cordon, C. B. Davies, J. M. Moll, and C. J. Thompson.

FOREIGN UNIVERSITY INTELLIGENCE.—*Genoa:* Dr. Vittorio De Cigna has been recognised as *privat-docent* of Laryngology and Otology.—*Heidelberg:* Dr. Erwin Rohde has been recognised as *privat-docent* of Pharmacology.—*Kiel:* Dr. Arthur Wilke has been recognised as *privat-docent* of General Pathology and Pathological Anatomy.—*Lyons:* Dr. Guillemard has been appointed (after public competition) Professeur *agrégé* of Biological and Medical Chemistry.—*Padua:* Dr. Luigi Maccagi has been recognised as *privat-docent* of Operative Medicine.—*Palermo:* Dr. Vincenzo Greco has been recognised as *privat-docent* of Medical Pathology.—*Pavia:* Dr. Domenico Cesa Bianchi has been recognised as *privat-docent* of Pathological Histology.—*Parma:* Dr. Mario Pelagatti, Professor in Sassari, has been appointed Professor of Dermatology in succession to the late Dr. Mibelli.—*Prague (German University):* Dr. Robert Salus has been recognised as *privat-docent* of Ophthalmology.—*Rome:* Dr. Stefano Mircoli of Genoa has been recognised as *privat-docent* of Medicine.—*Saratoff:* Dr. Pavloff of Kharkoff has been appointed to the Chair of Histology.—*Sienna:* Dr. Luigi Baldassari has been recognised as *privat-docent* of Hygiene.

ROYAL DENTAL HOSPITAL OF LONDON.—The annual dinner of the staff and past and present students of the Royal Dental Hospital of London was held in the Whitehall Rooms of the Hotel Metropole on Nov. 26th. Mr. H. Lloyd Williams presided, and amongst those present were Dr. H. Campbell Thomson, dean of the Middlesex Hospital; Mr. Sidney Spokes, dean of the National Dental Hospital; Mr. L. A. Bidwell, dean of the Post-Graduate College of the West London Hospital; and Mr. H. S. Clogg, vice-dean of the Charing Cross Hospital. The announcement that their Majesties King George and Queen Mary had consented to act as patrons of the hospital was received with hearty applause. In proposing the toast of the past and present students of the hospital and school, Mr. Lloyd Williams having congratulated the prize-winners of the year, went on to say how glad he was to see his old friend, Mr. J. F. Pink, once more amongst them after his severe illness. Having referred to the many difficulties experienced by the staff and students in the early days of the hospital, the chairman said he considered that the new building in Leicester-square was one of the best that had ever been erected for a special purpose. The influence of the hospital was felt by the students in their after work, and all carried with them happy memories of the atmosphere of the old school. Mr. W. A. Maggs, responding for the past students, said that the authorities of the different dental schools worked together without jealousy, both staff and students feeling the greatest pleasure in helping those in need of dental work. The various deans frequently met together and consulted on the best means of assisting dental science as a whole. He hoped in the near future to see a research fund instituted to enable men to devote themselves to this special branch. Mr. F. Quayle, chief prize winner, mentioned that at the present time the students numbered amongst themselves men from South Africa, United States, and Australasia, and the effect of this was to widen the minds of Celts, Saxons, and Colonials alike. In his speech the dean, Mr. W. H. Dolamore, endorsed what the chairman had said in reference to the return of their secretary, Mr. Pink. He felt he could not let the

occasion pass without saying how much they were indebted to Mrs. Pink, who had so ably carried out her husband's work during his enforced absence. Mr. Dolamore alluded to the warm affection felt for the Royal Dental Hospital by its old students. Mr. Bidwell, responding for the visitors, said that no one recognised more than he did the importance of dentistry. Many patients would never have passed through his hands if they had applied in their early days to a dental surgeon. He felt it was more important to teach children the use of the toothbrush than to play the piano. Mr. J. F. Colyer chairman of the Medical Committee, in proposing the health of the chairman, stated that the hospital never had a more faithful servant or the students a more patient teacher. He was in all things a man of good judgment and active sympathy, whose sound rules laid down when he was the first curator of the mechanical department contributed so much to its success. In his reply, Mr. Lloyd Williams referred to the pleasure that the visitors experienced at the "At Home" that afternoon at the hospital. They all appreciated the excellence and great variety of the work done there, and he wished to express on behalf of the old students their indebtedness to the demonstrators for the trouble they had taken.

THE BRITISH MEDICAL BENEVOLENT FUND GUILD.—There was a large attendance at the New Hospital for Women on Nov. 29th, when Lady Frederick Brudenell Bruce presided over the annual meeting of the British Medical Benevolent Fund Guild. The various reports, which were read by Lady Tweedy, Mrs. H. D. Rolleston, Mrs. Hutchison, and Mrs Liveing, showed that much useful work in relieving distress among members of the medical profession and in helping the widows and orphans of medical men had been accomplished during the year. The treasurer's statement showed a balance on the year's working of £163. The reports were unanimously adopted. Lady Frederick Bruce congratulated the Fund on the excellent result of their work and made a special appeal on behalf of the "Father Xmas" branch. Sir William Church, in seconding the adoption of the reports, said that it was impossible for the parent society, the British Medical Benevolent Fund, to adequately deal with many of the distressing cases which came before its notice, and this proved the extreme necessity for the guild through which the personal services of ladies could be given. Various votes of thanks concluded the meeting.

CENTRAL MIDWIVES BOARD.—A meeting of the Central Midwives Board was held at Caxton House, Westminster, on Nov. 24th, with Sir Francis Champneys in the chair. A letter from the clerk of the Privy Council requesting the Board to furnish the Lord President with statistics as to the number and distribution of certified midwives in the country for the use of the Austro-Hungarian Ministry of the Interior was considered and directions were given for the information to be supplied. A letter was considered from Dr. J. Niven, medical officer of health of Manchester, forwarding a copy of a resolution passed by the local supervising authority for that city as to the taking and recording of temperature. The Board decided that Dr. Niven be informed that the matter will be considered on the revision of the rules which is about to take place. A letter was considered from the Birkenhead Medical Society suggesting an amendment of Section 1 (2) of the Midwives Act, 1902, so as to prevent uncertified women holding themselves out as "emergency" women and practising as midwives with impunity. The Board decided that the Birkenhead Medical Society be informed that the suggestion will be borne in mind should an opportunity arise for dealing with it. A letter was considered from a certified midwife suggesting that the Board should issue a badge as the distinguishing mark of a certified midwife. It was decided that the question be referred to the Standing Committee for consideration and report. A letter was read from the clerk of the Cheshire county council reporting a certified midwife for an infringement of Section 1 (4) of the Midwives Act, 1902, and calling the attention of the Board to the fact that the Act prescribes no penalty for a breach of this subsection. The Board directed that the local supervising authority be thanked for their communication. Section 1 (4) reads as follows: "No woman certified under this Act shall employ an uncertified person as her substitute." Letters were considered from Dr. A. F. Whitwell of Shrewsbury, claiming a fee of 1 guinea for information given in the case of a certain midwife. The Board decided that a fee of 1 guinea be paid to Dr. Whitwell without prejudice to the action of the Board in any similar case arising thereafter.

THE late Dr. M. Krönlein, professor of surgery at the University of Zürich, has bequeathed a sum of £12,000 to build a surgical ward for children, £2000 to the pension fund of university professors, and several other sums of £400 each to various other charitable university institutions.

A COUNTY MEDICAL OFFICER FOR WEST SUSSEX.—The West Sussex county council at its meeting on Nov. 25th decided to appoint a county medical officer of health at a salary of £500 per annum with travelling and clerical and other out-of-pocket expenses. The recommendation of the public health committee was that the salary should be £600 per annum with the same additions, but the council decided on the smaller sum. It was explained at the meeting that the appointment was made in accordance with the provisions of the Housing and Town Planning Act, and a general order of the Local Government Board prescribing certain duties to be performed by the county medical officer of health; but although it was quite clear that the officer was necessarily responsible for the inspection of school children it was physically impossible for him to carry out those duties and the council had no intention of interfering with the duties of the present school medical officer.

DEATH OF MR. TREGENNA BIDDULPH GOSS.—Mr. T. B. Goss died at his residence, 1, The Circus, Bath, on Nov. 21st, in his seventy-fourth year. The deceased received his medical education at the Middlesex and Westminster Hospitals, and qualified M.R.C.S. Eng. and L.S.A. in 1863 and 1864 respectively. Mr. Goss shortly afterwards commenced practice in Bath, where he soon became very popular. He held several appointments; he was medical officer to the Royal School for Officers' Daughters, Lansdown; to Partis College, Weston; and for many years he was honorary surgeon to the Eastern Dispensary, Bath. From 1871 until 1908 he was medical officer to the Bath Post Office. Mr. Goss was a staunch Churchman, and for several years was sidesman at Walcot Church. He was also a prominent Freemason. By his death Bath has lost one of her oldest and most respected members of the medical profession. The funeral took place at Locksbrook Cemetery, Bath, on Nov. 25th. In accordance with the wishes of the deceased, the body was previously cremated at Woking.

SALE OF WAX ANATOMICAL MODELS.—A number of wax anatomical models were sold by Mr. J. C. Stevens at his auction rooms, King-street, Covent Garden, London, on Nov. 25th, by the order of the trustees of a deceased medical man. They were the personal work of the late M. L. Loreau, préparateur to the Salpêtrière and Bicêtre Hospital, Paris, and "considered by experts to be the finest in existence." All were mounted in glazed walnut cases, and the original cost was stated to have been nearly £500. They comprised models of the brain as a whole and various sections of the base of the brain, of the spinal cord with its membranes, ganglia, &c., the nervous and vascular supply of the teeth, and models showing the glandular and muscular structure of the lower jaw. One half-length model represented various hernia in the male. A case of specimens, comprising sets of fœtal, deciduous, and permanent teeth, the antrum of Highmore, the inferior dental canal, edentulous jaws, &c., was included. The total sum realised was £27 7*s*.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the executive committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on Nov. 18th. There were present Dr. F. de Havilland Hall (in the chair), Dr. M. Greenwood, Dr. M. G. Biggs, Dr. F. J. Allan, Dr. F. C. Martley, Dr. J. Pickett, Dr. J. W. Hunt, Dr. H. A. Sansom, Dr. W. Knowsley Sibley, Mr. Edward Bartlett, Mr. J. Brindley James, Mr. F. S. Edwards, Mr. Frederick Wallace, and Dr. J. B. Ball. The records of the business for the month of October were exceptionally good, showing a considerable margin in favour of the funds. The sickness experienced has been unusually light, and there is no doubt that 1910 will add a considerable sum to the already large financial reserves of the society. A very good feature of the

business is the large number of members who avail themselves of the facilities offered by recent alterations in the rules to increase the amount of their sickness benefits. Prospectuses and all further particulars on application to Mr. F. Addiscott, secretary, Medical Sickness and Accident Society, 33, Chancery-lane, London, W.C.

UNIVERSITY OF LONDON: GENERAL ELECTION.—CANDIDATURE OF SIR VICTOR HORSLEY.—At a meeting of the Liberal Association of the University of London held on Nov. 28th, Sir Thomas Barlow being in the chair, Sir Victor Horsley, F.R.S., was unanimously adopted as the Liberal candidate. The nomination will be held at the University on Saturday, Dec. 3rd, at 12 noon, and the polling begins on Monday, Dec. 5th, at 8 A.M., and continues till Friday, Dec. 9th, at 4 P.M.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Report on Unqualified Practice.

THE report founded on the Local Government Board inquiry into the extent of the practice of medicine and surgery by unqualified persons has been issued in the form of a small Blue-book. The information embodied in it has been supplied by medical officers of health. The Blue-book throws a lurid light on the evils arising from unqualified practice.

The Dissolution.

Parliament was prorogued, and afterwards dissolved, on Monday, Nov. 28th. The new Parliament after the General Election will assemble on Jan. 31st, 1911.

HOUSE OF COMMONS.

WEDNESDAY, NOV. 23RD.

The Superannuation of Asylum Officers.

Sir WILLIAM COLLINS asked the Secretary of State for the Home Department whether, in the event of any officer of an asylum, to which the Superannuation Act of last session applied, believing himself to be prejudiced in regard either to his right to a superannuation allowance, or as to the amount thereof, he would be prepared to receive and determine an appeal in accordance with Section 15 of the Act.—Mr. CHURCHILL wrote in reply: I am about to take the opinion of the law officers of the Crown on several points which have arisen under Section 15 of the Asylum Officers' Superannuation Act, and I therefore think it would be better to defer answering this question for the present.

THURSDAY, NOV. 24TH.

A Death from Anthrax.

Mr. JOWETT asked the Secretary of State for the Home Department whether his attention had been called to the death of John Beauland, who recently contracted anthrax at the works of Messrs. J. E. Addy and Company; and whether he would examine the depositions of evidence given at the subsequent inquest.—Mr. CHURCHILL answered: I have received reports of this case, from which it appears that the requirements of the regulations which apply to the sorting of wool were not adequately observed by the firm. A prosecution of the firm has been directed.

Dust in Wool-combing Factories.

Mr. JOWETT asked the Secretary of State for the Home Department whether the inquiry which he directed to be made last January into the conditions under which the process of raising a stack of wool was carried on and the means of protecting the workers in wool-combing factories against dust had been made, and, if so, who conducted the inquiry; and what was the nature of the report.—Mr. CHURCHILL replied: Inquiries have been made by the factory inspectors in the districts concerned at all the works which are under the wool-combing regulations as to the conditions under which the process of raising a stack or blending is carried on and the means for protecting workers against dust. The reports which have been received point to the need of steps being taken to safeguard the workers and show that in some works satisfactory measures had already been adopted, such as the use of a steam jet for keeping down the dust and exclusion of workers until the dust is settled, or the provision of exhaust ventilation. Before taking action the chief inspector has thought it desirable to consult the Bradford Anthrax Investigation Board, and it is hoped that its reply will be received very shortly.

BOOKS, ETC., RECEIVED.

LIPPINCOTT (J. B.) COMPANY, Philadelphia and London.

Genito-Urinary Surgery and Venereal Diseases. By J. William White, M.D., and Edward Martin, M.D. Ninth edition. Price 21s. net.

Applied Anatomy. By Gwilym G. Davis, Associate Professor of Applied Anatomy, University of Pennsylvania; M.D., Universities of Pennsylvania and Goettingen. With 630 illustrations, mostly from original Dissections and many in Colour, by Erwin F. Faber. Price 24s. net.

Disease of the Pancreas, its Cause and Nature. By Eugene L. Opie, Professor of Pathology, Washington University, St. Louis, Mo. Second edition, rewritten. Price 15s. net.

Normal Histology. With Special Reference to the Structure of the Human Body. By George A. Piersol, M.D., Sc.D. Eighth edition (rewritten). Price 15s. net.

LONGMANS, GREEN, AND CO., London, New York, Bombay, and Calcutta.

New Reduction Methods in Volumetric Analysis. A Monograph. By Edmund Knecht, Ph.D., M.Sc. Tech., F.I.C., and Eva Hibbert. Price 3s. net.

The Voice: An Introduction to Practical Phonology. By W. A. Aikin, M.D. Price 7s. 6d. net.

The Dawn of Character: A Study of Child Life. By Edith E. Read Mumford, M.A. Price 3s. 6d.

LONGMANS, GREEN, AND CO., London, New York, Bombay, and Calcutta. ESSON, R. L., AND CO., Johannesburg.

Practical Motherhood. By Helen Y. Campbell, L.R.C.P. and S. Edin., L.F.P. and S. Glasg. Price 7s. 6d.

LONGMANS, GREEN, AND CO., London, New York, Bombay, and Calcutta. HODGES, FIGGIS, AND CO., LIMITED, Dublin.

Dublin University Press Series. A History of the Theories of Aether and Electricity from the Age of Descartes to the Close of the Nineteenth Century. By E. T. Whittaker, Hon. Sc.D. Dub., F.R.S.; Royal Astronomer of Ireland. Price 12s. 6d. net.

MACLEOD, EVAN, 30, Holborn, London, E.C.

Surdus in Search of His Hearing. An Exposure of Deafness Quacks, Frauds on the Deaf, and a Reliable Guide to the Best Means of Help for the Deaf. Second Section. By Evan Yellon, Editor of the Albion Magazine for the Deaf, &c. Price, two volumes, 5s. net.

MEDICAL SCIENCE PRESS, Saint Louis. (Distributing Agents: INTERSTATE MEDICAL JOURNAL COMPANY, Metropolitan Building, St. Louis, Mo., U.S.A.)

Andreas Vesalius, the Reformer of Anatomy. [By James Moores Ball, M.D. Price $5.00.

MILLS AND BOON, LIMITED, London.

The Food Reformer's Companion: With Ninety Recipes. By Eustace Miles, M.A. Price 2s. 6d. net.

NEWS PRINTING CO., Paterson, N.J., U.S.A.

Thirty-third Annual Report of the Board of Health of the State of New Jersey, 1909, and Report of the Bureau of Vital Statistics.

OLIVER AND BOYD, Edinburgh.

The Transactions of the Edinburgh Obstetrical Society. Vol. XXXV, Session 1909–1910. Price not stated.

PARTRIDGE, S. W., AND CO., LIMITED, London.

The Probationer. By A. M. Irvine. Price 2s. 6d.

PEARS, A. AND F., LIMITED, 71–75, New Oxford-street, London, W.C.

Pears' Shilling Cyclopædia. Entirely and absolutely new edition. Price 1s.

SAUNDERS (W. B.) COMPANY, Philadelphia and London.

A Text-book of General Bacteriology. By Edwin O. Jordan, Ph.D. Second edition, thoroughly revised. Price 13s. net.

A Manual of Diseases of the Nose, Throat, and Ear. By E. B. Gleason, M.D., LL.D. Second edition, thoroughly revised. Price 12s. net.

Biology, General and Medical. By Joseph McFarland, M.D. Price 7s. 6d. net.

SCIENTIFIC PRESS, LIMITED, London.

Surgical Instruments and Appliances used in Operations. An Illustrated and Classified List, with Explanatory Notes. By Harold Burrows, M.B. Lond., B.S., F.R.C.S. Third edition, revised and enlarged. Price 1s. 6d. net.

SHERRATT AND HUGHES, London and Manchester.

Medical Etiquette. (Handbook of Elementary Deontology.) By Dr. George Surbled, Physician to the Anne-Marie Hospital, Professor of Deontology at the Paris Post-Graduate Medical School. Translated from the second French edition by W. P. Grant, M.Sc., M.B., Ch.B., M.R.C.S., L.R.C.P. With a Preface by Sir Dyce Duckworth, Bart., M.D., LL.D. Price 5s. net.

SMITH, ELDER, AND CO., London.

The Cradle of the Deep. An Account of a Voyage to the West Indies. By Sir Frederick Treves, Bart., G.C.V.O., C.B., LL.D., Serjeant Surgeon to H.M. the King, Surgeon in Ordinary to H.M. Queen Alexandra. Popular edition. Price 6s. net.

The Poetical Works of Mrs. Horace Dobell, with a Biographical Sketch. Price 10s. 6d. net.

"THE MEDICAL OFFICER," 36–38, Whitefriars-street, London, E.C.

The Medical Examination of the School Child. By D. A. Carruthers, M.D., D.P.H. Price 2s. 6d. net.

UNIVERSITY PRESS, Cambridge.

Plant-Animals. A Study in Symbiosis. By Frederick Keeble, Sc.D. Price 1s. net.

UNWIN, T. FISHER, Adelphi Terrace, London; and Inselstrasse, 20, Leipsic.

Aspects of Death and their Effects on the Living, as illustrated by Minor Works of Art, especially Medals, Engraved Gems, Jewels, &c. By F. Parkes Weber, M.A., M.D., Fellow of the Society of Antiquaries and of the Royal Numismatic Society of London. Price not stated.

VOGEL, E. D., Bookseller, Easton, Pa., U.S.A.

Internal Secretions from a Physiological and Therapeutical Standpoint. By Isaac Ott, A.M., M.D. Price $1.00.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BENTON, G. M., M.B., Ch.B. Vict., has been appointed Senior House Surgeon at the Royal Infirmary, Manchester.

BOURKE, ULICK J., L.R.C.P. & S. Edin., has been appointed Assistant Medical Officer at the Barnes Convalescent Home of the Royal Infirmary, Manchester.

BUCHANAN, JOHN D., M.B., B.Ch. R.U.I., D.P.H. Vict., has been appointed Resident Medical Officer at the Fever Hospital and Assistant to the Medical Officer of Health for Blackburn.

COWAN, JAMES, M.R.C.S., L.R.C.P., has been appointed House Physician at the Royal Infirmary, Manchester.

DAVIES, E. T. H., M.D. Lond., has been appointed Surgical Registrar at the London Temperance Hospital, Hampstead-road.

ELAM, W. H., F.R.C.S. Eng., has been appointed Certifying Surgeon under the Factory and Worshop Act for the Barnet District of the county of Hertford.

HIGGINS, T. T., M.B., Ch.B. Vict., has been appointed Junior House Surgeon at the Royal Infirmary, Manchester.

HUTCHINSON, R. C., M.B., Ch.B. Vict., has been appointed House Physician at the Royal Infirmary, Manchester.

JACKSON, R. A., M.B., Ch.B. Vict., has been appointed Senior House Surgeon at the Royal Infirmary, Manchester.

LAING, C. Y., M.R.C.S., L.R.C.P., has been appointed House Physician at the Royal Infirmary, Manchester.

PORTER, ALEX., M.B., Ch.B. Vict., has been appointed House Surgeon to Special Departments at the Royal Infirmary, Manchester.

WARBURTON, G. B., M.B., Ch.B. Vict., has been appointed Accident-room House Surgeon at the Royal Infirmary, Manchester.

WOODALL, A. F., M.B., Ch.B. Vict., has been appointed Junior House Surgeon at the Royal Infirmary, Manchester.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BARNSLEY, BECKETT HOSPITAL.—Second House Surgeon, unmarried. Salary £80 per annum, and all found.

BEDFORD COUNTY HOSPITAL.—House Physician. Salary £80 per annum, with apartments, board, and laundry.

BENENDEN SANATORIUM.—Medical Superintendent. Salary £250 per annum, with rooms, board, and laundry.

BERMONDSEY INFIRMARY, Lower-road, Rotherhithe, S.E. — Second Assistant Medical Officer. Salary £120 per annum, with rations, washing, apartments, &c.

BODMIN, CORNWALL COUNTY COUNCIL.—County Medical Officer of Health. Salary £500 per annum.

BRECONSHIRE COUNTY COUNCIL.—County Medical Officer of Health and County School Medical Officer. Salary £500 per annum.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—Assistant House Surgeon, unmarried. Salary £60 per annum, with apartments, board, and laundry.

CAIRO, EGYPT.—Medical Tutor at School of Medicine and Registrar to Kasr-El-Ainy Hospital. Salary £.E.600 a year.

CANTERBURY, KENT AND CANTERBURY HOSPITAL.—House Physician, unmarried. Salary £70 per annum, with board, lodging, and washing.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C. —Registrars, Assistant Anæsthetists, and Assistant Dental Surgeon.

CITY OF LONDON LYING-IN HOSPITAL, City-road, E.C.—Consulting Surgeon.

DUBLIN, DR. STEEVENS' HOSPITAL.—House Surgeon. Salary £100 per annum, with apartments.

GLOUCESTER, BARNWOOD HOUSE HOSPITAL FOR MENTAL DISEASES.—Second Assistant Medical Officer. Salary £150 per annum, with board.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—Two Assistant House Surgeons. Salary £75 per annum, with board, residence, and laundry.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—Senior House Surgeon. Salary £100 per annum, with residence, board, and washing.

INDIAN MEDICAL SERVICE, India Office, London.—Fourteen Commissions in His Majesty's Indian Medical Service.

KING'S COLLEGE HOSPITAL, London, W.C.—Assistant Ophthalmic Surgeon.

LEAMINGTON SPA, WARNEFORD, LEAMINGTON, AND SOUTH WARWICKSHIRE GENERAL HOSPITAL.—House Governor and Secretary. Salary £200 per annum.

LEICESTER CORPORATION ISOLATION HOSPITAL.—Resident Medical Officer and Assistant Medical Officer of Health. Salary £150 per annum, with board and residence.

LEICESTER INFIRMARY.—Second House Surgeon for six months. Salary at rate of £100 per annum, with board, apartments, and washing. Also Honorary Pathologist.

LINCOLN GENERAL DISPENSARY.—Resident Junior Medical Officer, unmarried. Salary £175 per annum, with apartments, &c.

LONDON COUNTY ASYLUM, Colney Hatch, New Southgate, N.—Junior Assistant Medical Officer, unmarried. Salary £160 per annum, with board, apartments, and washing.

MANCHESTER, ANCOATS HOSPITAL.—Honorary Surgeon.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead and Northwood, Middlesex.—Clinical Assistants for six months.

PARK HOSPITAL FOR CHILDREN, Hither Green, S.E.—Senior Assistant Medical Officer. Salary £250 per annum. Also Assistant Medical Officer. Salary £150 per annum. Both with board, lodging, and washing.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—Honorary Surgical Registrar. Also Pathologist. Salary £50 per annum.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—House Surgeon and House Physician, both for six months. Salary at rate of £30 per annum, with board, residence, and washing, in each case.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East.—Milroy Lecturer for 1912.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Assistant Physician. Also Female Junior Obstetric Assistant and Clinical Assistants.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Assistant Physician.

ST. LUKE'S HOSPITAL FOR MENTAL DISEASES, Old-street, London, E.C.—Second Assistant Medical Officer, unmarried. Salary £130 per annum, with board, apartments, and washing.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £50 per annum, with board, lodging, and washing.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—House Physician. Salary £100 per annum, with rooms, board, and washing.

SOUTH UIST.—Medical Officer. Salary £100, with house.

STAFFORD, STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House Surgeon. Salary £82 per annum, with board, residence, and laundry.

SWINDON, G.W.R. MEDICAL FUND SOCIETY.—Assistant Medical Officer, unmarried. Salary £300 per annum.

TREDEGAR WORKMEN'S MEDICAL AID AND SICK RELIEF FUND.—Chief Medical Officer. Salary £750 per annum, with house.

TRURO, ROYAL CORNWALL INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with rooms, board, and washing.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—Senior Resident Medical Officer. Salary £120 per annum, with board, residence, and washing.

WAKEFIELD, WEST RIDING ASYLUM.—Assistant Medical Officer. Salary £140 per annum, with apartments, board, washing, and attendance.

WEST HAM HOSPITAL.—House Physician; also Junior House Surgeon. Salary of former £100, and latter £75 per annum, with board and rooms.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Assistant Physician. Also Honorary Medical Registrar.

WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Resident Obstetric Assistant for six months. Board and lodging provided.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon for six months. Salary £80 per annum, with board, rooms, and laundry. Also Resident Medical Officer. Salary at rate of £100 per annum, with board, rooms, and laundry.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Tredegar, in the counties of Monmouth and Glamorgan; at Stourport, in the county of Worcester; at Mid-Calder, in the county of Edinburgh; and at Poole, in the county of Dorset.

Births, Marriages, and Deaths.

BIRTHS.

ALCOCK.—On Nov. 26th, at 22, Devonshire-street, W., the wife of N. H. Alcock, M.D., D.Sc., of a daughter.

MITCHELL.—On Nov. 25th, at Birdsgrove, Woking, the wife of Howard V. Mitchell, M.R.C.S., L.R.C.P., of Clacton-on-Sea, of a daughter.

WHYTE.—On Nov. 28th, at Swatow, China, to Dr. and Mrs. G. Duncan Whyte, a daughter.

MARRIAGES.

COX—WOOLFORD.—On Nov. 1st, at Great Marlow, Bucks, Stafford Mouritz Cox, M.D. T.C.D., to Sophia Woolford, daughter of the late William Woolford, of London.

DREW—MARSHALL.—On Nov. 18th, at Bolton, Lancs., John Harmer Drew, M.D., B.S. Lond., M.R.C.S., L.R.C.P., of Plymouth, son of the late G. F. A. Drew, D.I.G. R.N., to Ada Georgiana, fourth daughter of the late Cornelius Marshall and of Mrs. Marshall of High Bank, Bolton.

MIDDLEBROOKE—WRIGHT.—At St. Chad's, Longsdon, on Nov. 24th, by the Rev. W. Langworthy, of Foston, Herbert Edwin Middlebrooke, of Long Bennington, Grantham, to Mary Ethelwyn, eldest daughter of Robert Wright, J.P., of Leek, Staffs.

STEWART—FRANKS.—On Nov. 26th, at St. Marylebone Parish Church, by the Rev. W. D. Morrison, LL.D., Rector of the Parish, Purves Stewart, M.D., F.R.C.P., of 94, Harley-street, London, W., to Elizabeth Phipps Franks, daughter of the late William Franks, Esq., of Liverpool.

DEATHS.

BRIEN.—On Nov. 24th, suddenly, at Rockferry, Cheshire, Edward Henry Brien, M.D., aged 47 years.

FORRESTER.—On Nov. 25th, at Bournemouth, Charles Carmichael Forrester, M.B., C.M., D.P.H. (late of the Ministry of the Interior, Egypt), fourth son of the late William Forrester, of Arngibbon, Perthshire.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

AN AMUSING PROPOSITION.

THE following communication has been received by a well-known medical agent; no word from us is needed to accentuate its humour:—

DEAR SIR,—With reference to your advt. in THE LANCET of this week, I have pleasure in herewith replying to same. I see that you are willing to accept a partnership, and I herewith give you brief particulars of my proposition. I have discovered a cure for the most prevalent of the venereal diseases, and I am desirous of exploiting same. I have a medical and surgical knowledge, but have not graduated and have no degrees, and must therefore have a fully qualified medical practitioner at the head of the medical section. The salary would be between £500 and £1000 per annum, and in accordance with the increase of patients, could be materially increased. The *demand* for this is *enormous*, and as my treatment only takes from 1–2 months to effect a permanent cure (whereas all other methods take 2 years), there is practically a monopoly before it. I have studied minutely the awful conditions and results brought about by this terrible scourge, and apart from any pecuniary motives, I am most anxious to exploit this, if only for the purpose of removing this dread taint from humanity, and so make life for some of the sufferers worth living. I shall be glad to go further into the matter and give you further particulars at an interview, and should be glad if you will make an appointment either by 'phone or letter. Thanking you in advance."

We are certain that this letter was written in absolute good faith, the writer believing that he was enlisting the services of the medical agent in the matter of a professional transaction.

SUPERSTITIOUS REMEDIES.

To the Editor of THE LANCET.

SIR,—With regard to the curious fact that the Welsh word *eryrod* means "shingles" as well as "eagles," will you allow me to point out that the Welsh-English Dictionary of Dr. Wm. Owen Pughe (second edition, 1832) gives the following definition: "Eryri, *s.f.* (eryr)—What is precipitated or thrown out violently, an irruption; the shingles; called also eryr and eryrod." Spurrell (third edition, 1866) gives: "Shingle—Math o grugdardd," which translated means "shingle—a kind of pustule." Richards (fourth edition, 1839) gives no definitive meaning, merely saying, "Eryr, yr eryr, or eryri, or eryrod, *s.f.*—A disease called the shingles." Although there is just a hint in Pughe's definition as to why the word is applied to the disease shingles, none of these dictionaries clear up the question raised by your correspondent as to how this use of the word came about. Hoblyn, it may be mentioned, gives as the probable derivation of the word "shingles" the Latin *cingulum*, a girdle (so-called from the situation of the disease on the trunk of the body).

One of the daily papers, in quoting from THE LANCET the original paragraph, drags in, a little unkindly perhaps, the Salisburian taunt—"the Celtic Fringe." Superstitiousness is not confined to any specific parts of the British Isles. The person who shrinks from passing beneath an upstanding ladder we rub shoulders with every day in the London streets; and the Devil-scaring horse-shoe, is it not gravely installed in many an English home? A fortnight back a lady seating herself at table in certain tea-rooms at Richmond withdrew from her muff a lump of coal which she explained she had that morning picked up in the roadway "for luck." She further volunteered the statement that a little time previously while walking along a Kensington street she saw a lump of coal on the road, and while she was looking at it a carriage stopped and a lady alighted and straightway picked up the piece of coal, asking at the same time the pedestrian why she had not appropriated it. "I thought it rather large," was the reply. "The larger the lump, the greater the luck," rejoined the lady as she re-entered the carriage proud in the possession of her talismanic treasure.

Absurd as are these things, there is an aspect of credulity to which even they must knock under—namely, that unbounded gullibility which allows in this year of grace One Thousand Nine Hundred and Ten the quack to thrive as he has never thriven before—a species of asininity, again, not absolutely peculiar to the "Celtic Fringe."

I am, Sir, yours faithfully,

Stoke Newington, Nov. 21st, 1910. WM. ROBERTS.

ERECTING A BED IN A BALCONY.

COUNSEL recently moved in the Chancery Division, before Mr. Justice Warrington, for an injunction to restrain a gentleman living in a flat at Hove from placing a canvas erection or screen in the balcony of his flat and using it as a sleeping place. Mrs. Chandless, the plaintiff, was an elderly lady who had purchased her house, No. 10, King's-gardens, Hove, for £10,000, and Mr. Ford, the defendant, had rented a flat on the first floor of No. 9, for which he paid 10 guineas per week. Having been ordered by his medical adviser to live as much in the open air as possible, the plaintiff had a canvas structure in the nature of a tent or screen put up in his balcony to shelter a bed, in which he admitted that he slept at nights, although in his affidavit he denied "using the balcony as a bedroom," from which it may be inferred that he did not use it as a dressing-room. The plaintiff was apprehensive, however, lest he should be suffering from "consumption or some infectious disease," and it was stated that she endeavoured to protect herself by putting up a partition or screen outside her windows which she caused to be sprayed periodically with disinfectants. In her affidavit she stated that she had seen the bed on the balcony and a nurse sitting at a table with a lamp, and had also seen the gentleman in his bed, and had heard him give directions as to when he should be called. In asking for an injunction to prevent the described use of the balcony, counsel relied upon a covenant relating to the occupation of the flats, which, he said, were not to be used so as to cause offence or damage to other occupants or so as to interfere with the pleasurable enjoyment of their property. After hearing arguments on both sides, his lordship held that as the defendant was not suffering from any infectious disease he had not done anything to which a reasonable person could object, and he consequently refused to grant the injunction asked for. In comment, it may be said that the question whether the defendant might obtain sufficient fresh air without resorting to the balcony at night should be a matter for the decision of his medical attendant, from whom no evidence was apparently put forward at the hearing of the motion. The alarm of the plaintiff on the score of possible infection was, of course, groundless, but it may fairly be pointed out that, apart from this and from the applicability of the covenant referred to, the use in the manner described of the balcony of a flat on the first floor in what house agents would term "a first-class residential neighbourhood" is unusual and not unlikely to be resented by those living in other flats in the same building or in adjoining houses, or, in the case of a street, by residents on the opposite side.

WANTED—SUGGESTIONS FOR TREATMENT.

To the Editor of THE LANCET.

SIR,—Could any of your correspondents advise me as to the safest anthelmintic to give a woman, nearly five months pregnant, who is suffering from tapeworm? I am, Sir, yours faithfully,

Nov. 28th, 1910. TÆNIA.

HEALTH AND HOSPITALS IN GRENADA.

ACCORDING to the report of the Governor of Grenada on the annual Blue-book of the Colony, the population at present consists of 35,463 males and 38,697 females—total, 74,160. The birth-rate per 1000 of the mean estimated population in 1909 was 34·76, a very low figure for Grenada; and the death-rate was 18·82, also very low. Although the health of parts of the colony was disturbed by outbreaks of enteric fever and influenza, the death-roll of the year was small. The first-mentioned disease was practically confined to the Carriacou and St. George's districts—66 cases with 9 deaths occurring in the former, and 14 cases with 1 death in the latter. In the past Grenada has been little troubled with this disease. Influenza was epidemic towards the end of the year, and its effects seem to have been most felt in St. Andrew's, where 26 of the 39 deaths attributed to it were recorded. 872 patients were treated during the year in the Colony Hospital, of whom 495 were discharged cured, 247 relieved, and 44 died. In the out-patient department there were 1575 attendances given. The number treated in the Yaws Hospital again showed a marked increase, being 420, as compared with 266 in 1908, and the admissions were 361, as against 207. Of these, 339 were discharged cured. There was one death, its cause being general tuberculosis. In St. Andrew's District Hospital 159 patients were treated, 128 discharged cured, and 10 relieved. At the District Dispensary attached to this institution 9951 prescriptions were compounded. The free prescriptions have increased from 1857 in 1902 to 6402 in 1909. In the Carriacou District Hospital 278 patients were under treatment, of whom 203 were discharged as cured, 35 as relieved, 5 as not improved, and 12 died.

The rainfall in 1909 was heavy, but was fairly evenly distributed over the year. At the Richmond Hill Observation Station, in the south of the island, 80·54 inches were received, as compared with 68·44 in 1908, while at Plaisance, an estate in the mountains, no less than 212 inches were recorded. In Carriacou 67 inches were registered, and on three occasions there was an abnormal downpour. On April 22nd, in the "dry" season, 3½ inches fell there; on August 21st 5 inches fell in three hours, and on Sept. 16th 3 inches in less than an hour.

A DISCLAIMER.

THE article by Mr. John McElroy, published in THE LANCET of Nov. 12th, having been largely copied by the lay press, the author has written to say that some remarks which might be construed to mean that information had been given by him to a lay paper are incorrect. He regrets that such an impression should be conveyed to his medical brethren, and desires to point out that he had absolutely no knowledge of the copying until his attention was called to it.

CENTIGRADE AND FAHRENHEIT.

To the Editor of THE LANCET.

SIR,—Everybody knows the usual formula for converting degrees Centigrade into degrees Fahrenheit—viz., divide by 5, multiply by 9, and add 32. The following alternative method may be found easier to perform mentally as the figures can be more easily retained in the memory—viz., multiply by 2, deduct one-tenth of the product, and add 32. Example (*a*), 30° C. = 86° F. Method: 30 × 2 = 60. 60 − 6 = 54. 54 + 32 = 86. Example (*b*), 37° C. = 98·6° F. Method: 37 × 2 = 74. 74 − 7·4 = 66·6. 66·6 + 32 = 98·6. Example (*c*), 40° C. = 104° F. Method: 40 × 2 = 80. 80 − 8 = 72. 72 + 32 = 104.

I am, Sir, yours faithfully,

London, Nov. 17th, 1910. F.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

THE following Congresses, Conferences, and Exhibitions are announced for 1910:—

Dec. 8th and 9th (London, Guildhall).—Conference of Health-promoting Institutions and Fifth Annual General Meeting of the National League for Physical Education and Improvement.
,, 19th–22nd (Rome).—Twentieth Congress of Internal Medicine.

In 1911:—

Feb. 20th–25th (Cairo).—Fifth International Congress for the Blind.
March 2nd–6th (Berlin).—Thirty-second Balneological Congress.
April 4th–7th (London).—Fourth Annual Nursing and Midwifery Conference and Exhibition.
April 19th–22nd (Wiesbaden).—Twenty-eighth German Congress of Internal Medicine.
May–October (Dresden).—International Hygiene Exhibition.
May–October (London, Crystal Palace).—Festival of Empire Imperial Exhibition. (Profits to King Edward VII. Hospital Fund.)
May–October (?) (London, Shepherd's Bush).—Coronation Exhibition.
June (Paris).—First Congress of the International Medical Association for the Prevention of War.
June 5th–8th (Kolberg, Prussia).—Fifth International Congress of Thalassotherapy.
June and July (Romford).—Town Planning and Modern House and Cottage Exhibition.
July (Birmingham).—British Medical Association.
July 24th–29th (Belfast).—Congress of the Royal Sanitary Institute.
August or September (Berlin).—Third International Laryngo-Rhinological Congress.
September (Brussels).—Exhibition of Fractures.
,, (Turin).—International Congress of Pathology.
Sept. 11th–15th (Berlin).—National Congress for the Study and Prevention of Infantile Mortality (*Goutles de Lait*).
,, 11th–16th (The Hague).—Thirteenth International Congress on Alcoholism.
,, 18th–23rd (Sydney).—Australasian Medical Congress.
,, 24th–30th (Rome).—International Congress on Tuberculosis.
,, 25th–29th (Rome) Seventh International Congress of Dermatology and Syphilology.
October (Cologne).—International Congress of Criminal Anthropology.
Dec. 4th–9th (Havana, Cuba).—American Public Health Association.
(Date not fixed) (Genoa).—International Exhibition of Marine Hygiene.

In 1912:—

July (?) (Cologne).—International Congress of Nurses.
September (Prague).—International Congress of Radiology and Medical Electrology.
September (Berlin).—Sixth International Congress of Obstetrics and Gynæcology.

In 1913:—

(London).—Seventeenth International Congress of Medicine.
(Dresden (?)).—International Conference on Cancer.

In 1915:—

(London).—International Prison Congress.
(London).—Imperial Exhibition (?)

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 30th, 1910.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Nov. 24	30·04	S.E.	0·49	47	41	33	38	39	Overcast
,, 25	29·78	S.E.	0·05	47	42	38	38	39	Overcast
,, 26	29·95	S.W.	...	42	41	33	34	34	Foggy
,, 27	29·83	N.E.	...	52	52	34	36	37	Overcast
,, 28	29·36	N.W.	0·63	51	44	37	38	39	Cloudy
,, 29	29·83	S.W.	...	46	41	34	34	34	Foggy
,, 30	29·87	N.E.	...	44	42	34	34	39	Overcast

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

FRIDAY.
CLINICAL SECTION (Hon. Secretaries: Albert Carless, James Galloway): at 8 P.M.
Cases and Specimens.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.

MONDAY.—8.30 P.M., Discussion on Dilatation of the Heart and Heart Strain (resumed by Dr. W. Collier (Oxford), followed by Dr. S. West, Dr. A. Morison, Dr. F. J. Poynton, Sir John Broadbent, Dr. C. W. Chapman, Dr. F. P. Weber, and Dr. L. Guthrie).

HUNTERIAN SOCIETY, London Institution, Finsbury-circus, E.C.

WEDNESDAY.—8.30 P.M., Clinical and Pathological Evening.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.

WEDNESDAY.—5 P.M., Sir Alfred P. Gould, K.C.V.O.: Cancer. (Bradshaw Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. S. E. Dore: Clinique (Skin). 5.15 P.M., Lecture:—Dr. W. W. H. Tate: The Significance of Pain as a Symptom of Disease of the Pelvic Organs.
TUESDAY.—4 P.M., Dr. J. Collier: Clinique (Medical). 5.15 P.M., Lecture:—Dr. H. Campbell: The Treatment of Bronchitis in the Aged and Feeble.
WEDNESDAY.—4 P.M., Mr. B. M. White: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. D'Oyle Grange: Infective Arthritis.
THURSDAY.—4 P.M., Dr. R. Wells: Clinique (Medical). 5.15 P.M., Lecture:—Mr. S. Hastings: The Results of Nasal Obstruction.
FRIDAY.—4 P.M., Dr. G. Thompson: Clinique (Eye).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12 noon: Pathological Demonstration:—Dr. Bernstein. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Bidwell: Surgical Treatment of Hæmorrhage from Gastric and Duodenal Ulcer.
TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M.: Mr. Etherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. S. Taylor: Pneumonia.
WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 12.15 P.M., Lecture: Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Robinson: Diseases of Women. 5 P.M., Lecture:—Dr. Beddard: Practical Medicine.
THURSDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. Bernstein.
FRIDAY.—10 A.M., Medical Registrar: Demonstration of Cases in Wards. Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery.
SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.
TUESDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Wells: Medicine. 3.15 P.M., Mr. R. Carling: Surgery. 4 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.
WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.
THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. 4 P.M., Dr. Sale-Barker: Radiography. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 4.30 P.M., Special Lecture:—Mr. J. Cantlie: Applied Anatomy of the Abdomen.
FRIDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.
SATURDAY.—2 P.M., Operations. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10 A.M., Surgical Out-patient (Mr. E. Gillespie), 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. W. Carson).

TUESDAY.—Clinic: 10 A.M., Medical Out-patient (Dr. A. G. Auld), 2.30 P.M., Operations. Clinics:—Surgical (Mr. Howell Evans); Gynæcological (Dr. A. B. Giles). 3.30 P.M., Medical In-patient: (Dr. A. J. Whiting). 4.30 P.M., Special Demonstration:—Dr. A. J. Whiting: Selected Medical Cases.

WEDNESDAY.—Clinics:—2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Dr. A. H. Pirie).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. B. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel). 4.30 P.M., Lecture:—Dr. A. G. Auld: The Diaphragm in Health and Disease.

FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie).

HOSPITAL FOR SICK CHILDREN (UNIVERSITY OF LONDON), Great Ormond-street, W.C.

THURSDAY.—4 P.M., Lecture:—Dr. James: The Signs and Treatment of Dental Caries.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY.—4 P.M., Lecture:—Dr. Fenton: The Weak Heart.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Mr. L. Paton: Optic Neuritis.

FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. G. Holmes: Cerebral Tumour.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY.—3.45 P.M., Lecture:—Mr. C. Nourse: External and Middle Ear.

FRIDAY.—3.45 P.M., Lecture:—Dr. Abercrombie: Clinical Cases.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester-square, W.C.

THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell: Bullous and Vesicular Eruptions—I., Urticaria; II., Pemphigus; III., Pompholyx; IV., Varicella.

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Mr. S. Bishop: Appendicitis. (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (7th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.20 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (8th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (10th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.) Hospitals operations are performed daily.

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